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ABSTRACT

Described is a program designed to help elementary teachers of grades three through seven diagnose their students' mathematical competencies. This document is a package containing guides for a 14-day review of previous material for each grade level. Objectives and teaching strategies for daily lessons are detailed. Following the review, a diagnostic test is provided. An item analysis of the test is prepared by child, classroom, school and district and returned to the teachers in the school system where this program was developed and implemented. Standardized subtests in computation showed a marked increase in grades where the system was operating, while other areas of the curriculum were experiencing falling scores. This work was prepared under an ESEA Title III contract. (JP)

ED 086559

# Diagnostic Feedback System
# Mathematics

## Report -- Title III

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### History

In 1968, when John Aceto became consultant in mathematics for the Unified School District, results of standardized testing in the computation subtests showed a marked negative differential between the national norms and the Unified School District's achievement levels. It was established that the standardized test was a valid measure for the mathematics program, so steps were taken to introduce classroom intervention procedures which included review of computational objectives and diagnostic tests to pinpoint remedial needs of pupils. The feedback system consisted of analysis of teacher reports of the results of the diagnostic tests. The analysis was done by "hand" in the first year and then utilizing a time-sharing computer terminal in subsequent years. All reports, including an item analysis by classroom, by school, and by district, were completed in the mathematics department. In 1969 achievement levels on the standardized subtests in computation showed a marked increase in grades where the system was operating. Other areas of the curriculum were experiencing falling scores. The system established by the mathematics department was instituted in the Language Arts and Reading areas. With Mathematics, Language Arts, and Reading using the system the Research department of the Unified School District assumed the responsibility for collection, analysis and distribution of all reports.

The Title III grant enabled the Mathematics department to refine the established system and utilize the computer printout to give specific data to teachers by child, by item specification, by class, by school, by district.

### The System

The basic components of the system are:

**The Objectives**
The well established objectives of the mathematics program were communicated to teachers in a more usable form. Among the forms the objectives take are specifications for the computational component of the mathematics program.

**The Review**
At the beginning of each year a review of the previous grade level's objectives is conducted in grades 3 through 7 for fourteen consecutive days. The Reviews take the form of day-by-day teaching suggestions and pupil exercises.

**The Testing**
Diagnostic tests are prepared to specifically correspond with grade level expectations and the on-going curriculum.

**The Feedback**
Computer printout is prepared by child, classroom school and district and returned to the teacher within a week of delivery to the Data Processing department.

To accompany the printout the mathematics department prepares Item set descriptions, specification of each item and a remedial prescription by item.

**The Package**
On the succeeding pages are samples of all of the components of the operating system.

If this system has succeeded in increasing learning in children, the greatest amount of credit should go to the hard-working, dedicated teachers of the district that "make things work."

Respectfully submitted,

John D. Aceto
Consultant in Mathematics

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# KEEPING UP

Parents:

This Mathematics Study Guide is intended to help you to assist your child in maintaining the Arithmetic skills he has developed. Over the summer vacation we are well aware that our children do forget. Reading lists for use during the summer have been available; this Guide can serve the same purpose to suggest typical problems that you can make up.

This Guide represents the total Kindergarten through Sixth grade Arithmetic component of the Unified School District's mathematics program. It is divided into expectancy levels for each of the arithmetic operations including Place Value, Fractions, and Problem Solving. You should seek the level at which your child is most comfortable and periodically, during the summer, challenge him with problems he should be able to do. It would be hoped that you would include interesting verbal problems to develop his problem solving abilities.

It is hoped that this Guide is informative and can serve its intended purpose for the Elementary School children in your family.

John D. Aceto
Consultant in Mathematics

# Mathematics Study Guide

| | |
|---|---|
| KINDERGARTEN<br>Counting | a) From 1 to 10, 25, 50, 100<br>b) To a number<br>c) From a number to a number<br>d) The next number; The number before<br>e) Skip counting by 2's to 20, by 5's to 25, by 10's to 100 |
| Sets | a) Match two sets, one-to-one<br>b) Recognize two sets as having "Fewer Than", "More Than", or the same number of objects<br>c) Relates numerals 0-10 to sets.<br>d) Divides a set in half and identifies "$\frac{1}{2}$".<br>e) Joins two sets to form one or separates one set into two and relates numerals to operation. |
| Numerals and Operations | a) Recognizes and writes numerals 0-10.<br>b) Relates numerals 0-10 to sets of objects.<br>c) Puts numerals 1-10 in order.<br>d) Understand ordinal numbers first, second, ..., tenth.<br>e) Recognizes number words one through five.<br>f) Joins or separates sets and relates numbers to new sets formed.<br>g) Tells a story about joining and separating sets. |
| Comparisons | Understands<br>a) "is same as" or "is equal to"<br>b) "one more" and "one less"<br>c) larger and smaller<br>d) longer and shorter<br>e) higher and lower<br>f) heavier and lighter |
| Geometric Figures | a) Recognizes and draws a curved line, straight line, closed curve, circle, triangle, square, rectangle.<br>b) Matches figures of same size and shape.<br>c) Recognizes differences between geometric figures1<br>d) Recognizes and extends a pattern of geometric figures. |
| Measurement | a) Number of days in week<br>b) Number of months in year<br>c) Knows birth date, age, address, etc. |
| Money | a) Identifies penny, nickel, dime, quarter, one dollar bill, five dollar bill. |

In the examples below "d" stands for digit.

Level 1

Examples:

## Addition

Basic facts to 6
Basic facts to 10
2d + 2d (No renaming)
1d column
Applies commutative property

**Basic Facts to 6**

$\begin{array}{rrr} 3 & 1 & 4 \\ +2 & +4 & +2 \end{array}$

**Basic Facts to 10**

$\begin{array}{rrr} 5 & 8 & 6 \\ +4 & +2 & +3 \end{array}$

**2d + 2d (No renaming, no "carrying")**

$\begin{array}{rr} 21 & 46 \\ +33 & +31 \end{array}$

**1d column**

$\begin{array}{rr} 5 & 3 \\ 2 & 4 \\ +2 & +1 \end{array}$

**Applies commutative property**

The child recognizes and uses the fact that 2 + 3 = 3 + 2

## Subtraction

Basic facts to 6
Basic facts to 10
2d - 2d (No renaming)

**Basic Facts to 6**

$\begin{array}{rrr} 6 & 5 & 4 \\ -4 & -2 & -1 \end{array}$

**Basic Facts to 10**

$\begin{array}{rrr} 9 & 8 & 10 \\ -5 & -2 & -7 \end{array}$

**2d - 2d (No renaming, no "borrowing")**

$\begin{array}{rr} 59 & 83 \\ -25 & -42 \end{array}$

## Place Value

Writes numerals
__ tens and __ ones
Identifies digits in 100's, 10's or 1's place
Writes numerals to 100

**Writes Numerals**

34 is ___tens and _____ones

**Identifies digits in 100's, 10's or 1's place**

What digit is in the 10's place in 743?

## Fractions

Identify $\frac{1}{2}$, $\frac{1}{4}$

**Identify $\frac{1}{2}$, $\frac{1}{4}$**

What fraction is represented by the shaded portion of this diagram?

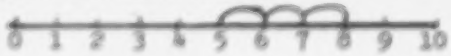
What fraction is represented by the shaded portion of this diagram?

## Others

Number line +, -
Measurement
Time

**Number Line +, -**

Given a number line and an addition or subtraction problem the child will be able to use the number line to find the solution.




5+3 = 8

**Measurement**

Given a line segment and a ruler the child will be able to write the numeral which tells how long the line segment is in inches.

**Time**

The child will be able to tell time to the hour and to the half hour.

## Addition

**Level 2**

- Basic facts to 18 ○
- 2d + 2d (No Renaming) ○
- 2d + 2d (Renaming in 10's column) ○
- 1d column $\begin{array}{r} 3 \\ 4 \\ +5 \end{array}$ ○

**Basic Facts to 18**

$\begin{array}{rrr} 4 & 3 & 9 \\ +6 & +9 & +8 \end{array}$

**2d + 2d (No Renaming, i.e., "No borrowing" and "No carrying")**

$\begin{array}{rrr} 43 & 23 & 19 \\ +26 & +55 & +40 \end{array}$

**2d + 2d (Renaming in 10's column)**

$\begin{array}{rrr} 43 & 83 & 52 \\ +65 & +76 & +63 \end{array}$

**1d column**

$\begin{array}{rrr} 3 & 4 & 6 \\ 2 & 7 & 3 \\ +6 & +5 & +1 \end{array}$

## Subtraction

- Basic facts to 18 ○
- 2d - 2d (No Renaming) ○
- 3d - 2d (No Renaming) ○

**Basic Facts to 18**

$\begin{array}{rrr} 16 & 14 & 18 \\ -4 & -7 & -9 \end{array}$

**2d - 2d (No Renaming)**

$\begin{array}{rrr} 47 & 56 & 79 \\ -23 & -35 & -72 \end{array}$

**3d - 2d (No Renaming)**

$\begin{array}{rrr} 465 & 976 & 345 \\ -52 & -73 & -25 \end{array}$

## Multiplication

- Basic facts to 18 as Four 4's = ○
- Relationship between +, x: 5 + 5 is two 5's ○

**Basic Facts to 18**

Five 3's =
Six 2's =
Two 5's =

**Relationship Between +, x**

6+6+6 is three 6's.

4+4+4+4 is four 4's.

## Division

- Basic facts to 18 as: How many 5's in 15? ○

How many 2's in 12?

How many 3's in 18?

## Place Value

- Identifies $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ as one of ___ equal parts ○

**Concept of > or <**

Fill in >, <, or =.

4 + 8 ___ 10, 6 ___ 5

14 ___ 7+8

**Expanded Notation**

105 means ___100's ___10's ___1's.

**Identifies Digits in 100's, 10's, 1's place**

In 175 what digit is in 10's place

## Fractions

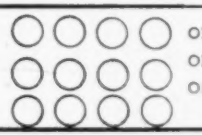
- Concept of > or < ○
- Expanded notation ○
- Identifies digits in 100's, 10's, 1's place ○

I II III

$\frac{1}{2}$ is shown in ___

$\frac{1}{4}$ is shown in ___

$\frac{1}{3}$ is shown in ___



one half of 12 is ___

one third of 12 is ___

one fourth of 12 is ___

## Others

- Write number sentences +, - ○
- Understand relationship between +, - ○
- Problem Solving: One step addition and subtraction problems ○
- Money ○

**Writes number sentences +, -**

3 + 4 = 7

MONEY: Converts pennies, nickels, dimes, quarters, half dollars, dollars

**Understands Relationship Between +, -**

Given the numbers 5, 7, 12 the child will write the + and - facts relating them

5+7 = 12 12-5 = 7

7+5 = 12 12-7 = 5

**Problem Solving: One Step +, -**

A man had 96 cupcakes.
A boy bought 12 of them.
How many cupcakes did the man have left?

## Addition

Level 3

Time testing Basic Facts ○
5 sec ○ 4 sec ○ 3 sec ○
3d + 3d ○
2d column ○
Finds missing addends
5 + □ = 9 ○
2d + 2d (Renaming) ○

**Time Testing Basic Facts**
The child should do basic facts problems as below at a rate of 1 in 5 seconds, 4 seconds or 3 seconds.

| | | |
|---|---|---|
| 5 | 9 | 6 |
| +3 | +7 | +4 |

**3d + 3d**

| | |
|---|---|
| 211 | 645 |
| +326 | +287 |

**2d column**

| | |
|---|---|
| 23 | 32 |
| 46 | 43 |
| +27 | +78 |

**Finds Missing, add ends**

3 + □ = 7

△ + 2 = 8

**2d + 2d (renaming)**

| | |
|---|---|
| 37 | 96 |
| +85 | +27 |

## Subtraction

Time testing Basic Facts
5 sec ○ 4 sec ○ 3 sec ○
3d - 3d (No Renaming) ○
3d - 2d (Renaming) ○
Finds missing numeral
9 - □ = 6 ○

**Time Testing Basic Facts**
The child should do basic facts problems as below at a rate of 1 in 5 seconds, 4 seconds or 3 seconds.

| | | |
|---|---|---|
| 9 | 7 | 8 |
| -5 | -2 | -6 |

**3d-3d (No renaming)**

| | |
|---|---|
| 578 | 872 |
| -326 | -461 |

**3d-2d (Renaming)**

| | |
|---|---|
| 463 | 133 |
| - 88 | - 75 |

**Finds missing numeral**

6 - □ = 3

□ - 2 = 5

## Multiplication

Basic facts to 30 ○
Fill in missing factor ○
5 x □ = 30 ○
2d x 1d ○
3d x 1d ○

**Basic Facts to 30**

| | | |
|---|---|---|
| 4 | 4 | 5 |
| x3 | x7 | x6 |

**Fill in missing factor**

5 x □ = 20

△ x 3 = 18

**2d x 1d**

| | | |
|---|---|---|
| 23 | 32 | 36 |
| x 2 | x 4 | x 4 |

**3d x 1d**

| | |
|---|---|
| 321 | 246 |
| x 4 | x 3 |

## Division

Basic facts
to 18 ○
to 30 ○
1d)2d ○ 1d)3d ○
Fill in missing numeral
30 ÷ □ = 5 ○

**Basic Facts to 18**

3)15 4)12 6)18

**Basic Facts to 30**

6)24 9)27

**1d)2d**

2)24

6)30

**1d)3d**

8)168

6)120

**Fill in Missing Numeral**

28 ÷ □ = 7

△ ÷ 4 = 6

## Place Value

Identifies digits to 1000's place ○
Expanded notation to 1000 ○
Regroups, renames numbers ○

**Identifies digits to 1000's place**
What digit is in the 1000's place in 3284?

**Expanded notation to 1000**

315 means _____ hundreds
1 ten and 5 ones

**Regroups, Renames Numbers**

46 is ____ tens and 6 ones
or 3 tens and _____ ones

## Fractions

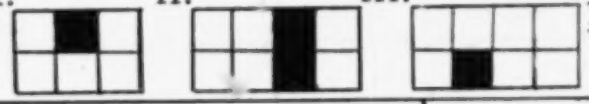
Identifies $\frac{1}{6}$, $\frac{1}{8}$, $\frac{2}{3}$, $\frac{3}{4}$ ○
Equivalent fractions on number line ○
Uses >, < with fractions ○

**Identifies $\frac{1}{6}$, $\frac{1}{8}$, $\frac{2}{3}$, $\frac{3}{4}$**

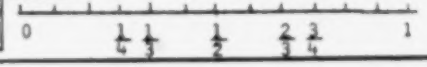
$\frac{1}{6}$ is shown in diagram ____

$\frac{1}{8}$ is shown in diagram ____

I. II. III.



**Equivalent fractions on number line**




## Others

Applies commutative principle to addition and multiplication ○

**Applies commutative principle to addition and multiplication**

23 + 42 = 42 + 23 and 6 x 4 = 4 x 6

$\frac{1}{2} = \frac{\square}{12}$

Uses >, < with fractions

$\frac{3}{6}$ > or < $\frac{2}{6}$

## Addition

Level 0

- Time testing Basic Facts
- 3d + 3d
- 3d column
- "like" fractions
- Mixed Numbers

**Time Testing Basic Facts**
Child should do basic facts at rate of 1 per 3 seconds

| | | | |
|---|---|---|---|
| 9 | 6 | 9 | 7 |
| +2 | +8 | +9 | +8 |

**3d + 3d**

| | |
|---|---|
| 324 | 675 |
| +493 | +125 |

**3d Column**

| | |
|---|---|
| 168 | 260 |
| 34 | 521 |
| +497 | +457 |

**"Like" Fractions**

$\frac{3}{16} + \frac{7}{16} =$

$\frac{1}{5} + \frac{4}{5} =$

**Mixed Numbers**

| | | |
|---|---|---|
| $1\frac{1}{8}$ | $1\frac{1}{12}$ | $\frac{7}{8}$ |
| $+\ \frac{3}{8}$ | $+\ \frac{7}{12}$ | $+\ \frac{5}{8}$ |

## Subtraction

- Time testing Basic Facts
- 4d - 3d
- "like" fractions
- Mixed Numbers
- 3d - 3d (renaming)

**Time Testing Basic Facts**
Child should do basic facts at rate of 1 per 3 seconds.

| | | | |
|---|---|---|---|
| 18 | 15 | 14 | 12 |
| - 7 | - 6 | - 7 | - 5 |

**4d - 3d**

| |
|---|
| 6432 |
| - 319 |

**"Like" Fractions**

$\frac{7}{10} - \frac{3}{10} =$

$\frac{11}{12} - \frac{5}{12} =$

**Mixed Numbers**

| | |
|---|---|
| $1\frac{7}{10}$ | $1\frac{5}{8}$ |
| $-\ \frac{9}{10}$ | $-\ \frac{7}{8}$ |

**3d - 3d (renaming)**

| | | |
|---|---|---|
| 412 | 800 | 653 |
| -147 | -167 | -544 |

## Multiplication

- Time testing Basic Facts
- 5 sec / 4 sec / 3 sec
- Basic facts to 81
- Multiplies by 10's
- Multiplies by 100's
- 2 & 3d x 1d
- 2d x 2d
- Estimate Products

**Time Testing Basic Facts**
Child should do basic facts at rates of 1 per 5, 4 and 3 seconds.

**Basic Facts to 81**

| | | |
|---|---|---|
| 4 | 6 | 9 |
| x7 | x9 | x9 |

**Multiplies by 10's**

| | |
|---|---|
| 40 | 70 |
| x 6 | x 8 |

**Multiplies by 100's**

| | |
|---|---|
| 300 | 800 |
| x 9 | x 5 |

**2dx1d**

| |
|---|
| 75 |
| x 6 |
| 68 |
| x 7 |

**3dx1d**

| |
|---|
| 437 |
| x 4 |
| 923 |
| x 8 |

**2dx2d**

| |
|---|
| 73 |
| x27 |
| 66 |
| x75 |

**Estimate Products**
51 x 48 is about 50x50 or 2500

## Division

- Time testing Basic Facts
- 5 sec / 4 sec / 3 sec
- 1d\)2d
- 1d\)3d
- 2d\)3d
- 2d\)3d with R
- Estimate quotients

**Time Testing Basic Facts**
Child should do basic facts at rates of 1 per 5, 4, and 3 seconds.

45 ÷ 9 = 5

56 ÷ 7 = 8

**1d\)2d**

$4\overline{)80}$

$4\overline{)84}$

$4\overline{)85}$

**1d\)3d**

$8\overline{)160}$

$8\overline{)168}$

$8\overline{)171}$

**2d\)3d**

$40\overline{)960}$

$42\overline{)966}$

**2d\)3d with R**

$50\overline{)110}$

$43\overline{)140}$

$34\overline{)239}$

**Estimate Quotients**
810 ÷ 42 is about 800 ÷ 40 or 20

## Place Value

- Whole numbers to 1000
- to 1000000

Use digits to write two million, six hundred ten thousand, four hundred three.
Is 67,270,000 greater or less than fifty million?

## Fractions

- Equivalent fractions
- Reduce to lowest terms

$2 = \frac{\square}{8}$ $\quad 1\frac{3}{4} = \frac{\square}{4}$ $\quad \frac{5}{2} = 2\frac{\square}{2}$ $\quad$ Reduce $\frac{8}{12}$, $\frac{3}{6}$, & $\frac{12}{15}$ to lowest terms.

## Utility

- Applies associative principle +, x
- Uses distributive principle for multiplication
- Perform basic operations with money values ($3.33 x 9)
- Two step addition and subtraction problems
- One step multiplication problems

**Applies Associative Principle to +, x**

(17+99) + 1 = 17 + (99+1)
= 17 + 100
= 117

(94x83) x 0 = 94 x (83x0)
= 94 x 0
= 0

**Uses Distributive Principle for Multiplication**

3 x (70+4) = (3x70) + (3x4)
= 210 + 12
= 222

**Perform Basic Operations With Money Values**

$2.47 x 5 =

**Two step + and - Problems**
John had $1.12 and then earned $.75 more. He then bought a model car for $.94. How much did he have left?

**One Step Multiplication Problems**
A hall has 25 rows. If there are 23 seats per row, what is the total number of seats?

## Addition

Level 5

- Time Testing Basic Facts
- 4d column
- All fractions
- All decimals

**Time Testing Basic Facts**
The child should do basic facts as below at the rate of 1 every 3 seconds.

9 4 8 6
+5 +7 +8 +7

**4d Column**

| | |
|---|---|
| 3427 | 2473 |
| 3162 | 8219 |
| 248 | 4444 |
| +5491 | +5277 |

**All Fractions**

$\frac{6}{7} + \frac{2}{5} =$

$5\frac{1}{8} + 7\frac{2}{9} =$

**All decimals**

31.402 81.2 + 94.713 =
+ 9.21

## Subtraction

- Time Testing Basic Facts
- 5d - 4d
- All fractions
- All decimals

**Time Testing Basic Facts**
The child should do basic facts as below at the rate of 1 every 3 seconds.

9 10 8
- 5 - 7 -3

**5d - 4d**

| | |
|---|---|
| 47325 | 65431 |
| - 8129 | - 6543 |

**All Fractions**

$\frac{7}{9} - \frac{1}{2} =$

$2\frac{3}{8} - 1\frac{5}{7} =$

**All decimals**

84.327 81.4 - 6.472 =
-65.42

## Multiplication

- Time Testing Basic Facts
- 3d x 3d
- Fractions
- Mixed Numbers

**Time Testing Basic Facts**
The child should do basic facts as below at the rate of 1 every 3 seconds.

5 8 9 6
x6 x4 x7 x8

**3d x 3d**

| | |
|---|---|
| 462 | 834 |
| x971 | x647 |

**Fractions**

$\frac{7}{9} \times \frac{3}{4} =$

$\frac{9}{11} \times \frac{4}{15} =$

**Mixed Numbers**

$1\frac{5}{6} \times 4\frac{3}{4} =$

$2\frac{5}{8} \times 2\frac{3}{8} =$

## Division

- Time Testing Basic Facts
- 4d/1d  4d/1d with R
- 3d/2d with R
- Division by Algorithm
- Quotients as Mixed Numerals

$24 \div 5 = 4\frac{4}{5}$

**Time Testing Basic Facts**
The child should do basic facts as below at the rate of 1 every 3 seconds.

5)35 6)36 8)24 48÷6 =

**4d/1d**

2d)4d 72)1,008

**4d/1d with R**

2d)4d with R 33)2478

**3d/2d with R**

2d)5d with R 63)43751

**Division by Algorithm**

$$\begin{array}{r} 19 \\ 23\overline{)450} \\ 230 \\ \hline 220 \\ 207 \\ \hline 13 \end{array}$$

**Quotients as Mixed Numerals**

$23 \div 7 = 3\frac{2}{7}$

$48 \div 5 = 9\frac{3}{5}$

## Place Value

- Writes numbers in powers of 10.
- Reads and charts decimal numbers.

**Writes numbers in powers of 10**

3465 = 3 x 1000 + 4 x 100 + 6 x 10 + 5

**Reads and charts decimal numbers**

3.56 is 3 and 56 hundredths

| tens | ones | tenths |
|---|---|---|
| 3 | 5 | 6 |

is (35 and 6 tenths)

## Fractions

- Equivalent fractions in lowest terms
- Converts fractions to decimals

**Equivalent fractions in lowest terms.**
Reduce $\frac{6}{15}$ to an equivalent fraction in lowest terms.

$\frac{8}{12} = \frac{\triangle}{3}$ $\frac{12}{20} = \frac{\square}{5}$

**Converts fractions to decimals**
Write a decimal for each of the following fractions:

a) $\frac{55}{11}$ b) $\frac{23}{10}$ c) $\frac{2}{4}$ d) $\frac{3}{8}$

## Others

- One step division problems
- Two step problems mixed operations

**One Step Division Problems**
Bob bought 6 apples for 72 cents. How much would it cost for one apple?

**Two Step Problems Mixed Operations**
Tony bought 4 hot dogs at 30 cents apiece and 2 sodas at 12 cents each, how much did Tony spend?

**Addition**

Level 6

Time testing Basic Facts ◯
5d column ◯
All fractions ◯
All decimals ◯

**Time Testing Basic Facts**
The child should do basic facts problems as below at the rate of 1 every 3 seconds.

| | | |
|---|---|---|
| 9 | 6 | 8 |
| +7 | +5 | +4 |

**5d Column**

| | |
|---|---|
| 43725 | 98765 |
| 3842 | 86421 |
| 12489 | 97532 |
| 342 | |

**All Fractions**

$\frac{7}{9} + \frac{5}{6} =$

$\frac{15}{16} + 1\frac{4}{9} =$

**All Decimals**

| | |
|---|---|
| 341.213 | 28.1 |
| +271.428 | + 4.002 |

**Multiplication Subtraction**

Time testing Basic Facts ◯
5d - 5d ◯
All fractions ◯
All decimals ◯

**Time Testing Basic Facts**
The child should do basic facts problems as below at the rate of 1 every 3 seconds.

| | | |
|---|---|---|
| 12 | 16 | 13 |
| - 4 | - 9 | - 8 |

**5d - 5d**

| | |
|---|---|
| 24348 | 84715 |
| -17239 | -69238 |

**All Fractions**

$2\frac{1}{3} - 1\frac{1}{7} =$

$\frac{5}{9} - \frac{5}{12} =$

**All Decimals**

18.2 - 4.713 =

82.71
-76.403

**Multiplication**

Time testing Basic Facts ◯
3d x 3d ◯
Fractions ◯
Decimals ◯

**Time Testing Basic Facts**
The child should do basic facts problems as below at the rate of 1 every 3 seconds.

| | | |
|---|---|---|
| 5 | 8 | 7 |
| x9 | x9 | x6 |

**3d x 3d**

| | |
|---|---|
| 271 | 479 |
| x184 | x635 |

**Fractions**

$\frac{4}{9} \times \frac{15}{28} =$

$1\frac{3}{7} \times 2\frac{1}{5} +$

**Decimals**

5.42
x1.03

2.08 x 1.47 =

**Division**

Time testing Basic Facts ◯
3d⟌6d with R ◯
as fractions in lowest terms ◯
Division by Algorithm ◯
All fractions ◯
All decimals ◯
Divide to nearest hundredths ◯

**Time Testing Basic Facts**
The child should do basic facts problems as below at the rate of 1 every 3 seconds.

$5\overline{)20}$ $7\overline{)63}$ $8\overline{)72}$

**3d⟌6d with R(remainder)**

$144\overline{)9764}$ $452\overline{)1253}$

**As Fractions in lowest Terms**

$24 \div 5 = 4\frac{4}{5}$ $100 \div 7 = 14\frac{2}{7}$

**All Fractions**

$\frac{4}{5} + \frac{2}{3} =$ , $1\frac{2}{5} + \frac{5}{8} =$

**All Decimals**

$.8\overline{)2.4}$ $3.1\overline{)24.11}$

**Divide to nearest hundredths**

$7\overline{)57.000}$ 8.142 rounded off = 8.14

**Place Value**

Uses expanded notation — $\frac{1}{10}, \frac{1}{10^2}, \cdots$ ◯

**Uses expanded notation**

$36.42 = (3 \times 10) + 6 + (4 \times \frac{1}{10}) + (2 \times \frac{1}{10^2})$

**Fractions**

Converts fractions to decimals, vice-versa ◯

**Converts fractions to decimals, vice-versa**

Express each of the following as a decimal.

a) $\frac{9}{100}$ b) $\frac{2}{5}$ c) $9\frac{3}{10}$

Express each of the following as a fraction in lowest terms

a) .3 b) .45 c) 3.27

**Others**

Ratio ◯
Proportion ◯
Percent ◯

**Ratio**
Using the smallest whole numbers possible, write the ratios for the following:

a) $1\frac{1}{2}$ to 3 b) 9 to $2\frac{1}{4}$

c) $\frac{3}{4}$ to $\frac{1}{2}$

**Proportion**
Which of the following proportions are true?

a) 45:15 = 1:$\frac{1}{3}$ (T)

b) 9:3 = 7:$2\frac{1}{4}$ (F)

**Percent**
Express 25% as a common fraction in lowest terms and as a decimal.
Express $\frac{3}{10}$ as a percent.

Division of Instructional Services
Unified School District No. 1 of Racine County
Racine, Wisconsin

Department of Mathematics

To: All Third Grade Teachers
Elementary School Principals

From: John D. Aceto, Consultant in Mathematics

Subject: Review Program for Computational Skills
(In two parts: 1) This large folded sheet
2) Review Exercises)

3rd Grade Review Part 1

This Review Package will suggest Warm up activities, short written reviews, and pages in the book for developmental activities.

Warm up Activities

Warm up activities have, as their main purpose, to develop and maintain skills in Basic Facts. A two to five minute activity at the beginning of each math period is usually quite effective. These activities can take the form of contests, flash card drills, mental arithmetic and other game type activities. Warm ups can help motivate and stimulate interest in mathematics, as well as keeping children skillful in Basic Facts.

The objective of the warm up activities in this package is to review all of the addition and subtraction facts. Day by day, the number of facts will be increased tying on to the child's previous knowledge and facts learned in the days before. An example is to use the child's previous knowledge and facts learned in the days before. An example is to use the child's skill of counting and knowing the number before and after a given number with knowing adding one, subtracting one, adding two. (As the children review the facts, you may want them to make their own flash cards.)

Review Activities (in accompanying material)

The written review activity could be used at any appropriate time during the math period, but should probably be used after some developmental oral and/or written activity that reviews the concepts and skills that are represented in the activity. The review activities could give you some feedback as to how well your pupils understand the material presented and what needs they have for reteaching and reinforcement.

Hard-cover Book

Your pupils, for the first time, will be using a hard-cover book for math in which they will not be able to write. Great care has to be taken to teach the pupils where to write their names, where to write the problems on the paper, and the format of the problems, 1a, b, c, (do you want them to learn to write exercises in columns, etc.?)

Lesson Sequence

The center section of this package represents a suggested lesson sequence to help establish an instructional strategy to accomplish the objectives of Learning Stages 1 and 2.

Warm Up Activities -- Some suggestions are on the back page.

1st Day

Warm up:

Counting Activities: "I'm thinking of a number, 6, -- tell me the number after, the number before, and two after."
Basic facts: "Can we add zero? 4+0, 5+0, ..."

Review Activity: Place Value

Objectives: The pupil will be able to:

1) use expanded notation to hundreds
2) identify digits in 100's, 10's, and 1's place
3) order numbers to 1000

Pages 1-7

Comments: Review the ideas of grouping by ten's and the meaning of 2 tens and 4 ones, etc. Orally extend the ideas that are presented on the pages in the book. Use the Review Exercises I as a culminating activity to the oral lesson.

2nd Day

Warm up:

"Is adding 1 like the next number? Subtracting 1 like the number before, adding 2 like two after?"

(+1, -1, +2 facts)

Review Activity: Place Value

Objectives: The pupil be able to:

1) tell how many places in a numeral
2) write numerals from written number names
3) write numerals in expanded form

Pages 40-41

Comments: This may be a good opportunity to teach how to place problems on a page for written work by completing exercises 6 and 7 and page 41. This is the first year your pupils have used a hard cover book in math; use a separate piece of paper to record their work. Use Review Exercises II as a culminating activity.

3rd Day

Warm up:

"Do we know our doubles? Review previous facts a

Review Activity:

Objectives: The pupil

1) use the commutat
2) use the number l
able to verify
3) identify even a
4) respond to basic

Pages 11-14

Comments: This is an op
concept of addition wi
counters. Constantly
they respond to facts
(doubles, one more, etc

4th Day

Warm up:

"Let's review all the addition facts we really know and also really learn the subtraction facts."

Review Activity:

Objectives: The pupil will be able to:

1) write basic subtraction facts corresponding to the addition facts he has learned
2) write and solve number sentences based on story problems using addition and subtraction

Pages 18-21, 26, 22, 15, 23

Comments: Explore Extra Practice pages 294 and 295 as oral and written activities. The solving of story problems should be begun. Use time to analyze word problems and writing appropriate number sentences. Work with story problems should be ongoing almost daily throughout the year -- two or three problems. Use VI.

7th Day

Warm up:

"All the combinations adding to 10 are very important, 3+7, 4+6, ... If we know these then we know 8+3 because 10's one more than 9+2. Are there others?"

Review Activity:

Objectives: The pupil will be able to:

1) write and solve number sentences based on story problems using addition and subtraction
2) recognize $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$ as one of 2, 3, or 4 equal parts.

Pages 26, 27, 45, 18, 93, 96

Comments: Continue work on problem solving. Ask pupils to tell a story about a number sentence, then solve. You could have "problems of the day" by asking pupils to make up problems for the class to solve. Pupils may not have had fractional notation. They should be able to find "one-half" but not $\frac{1}{2}$. The notation is introduced on page 96. Use VIII.

6th Day

Warm up:

"Is adding 9 almost li
counting by 10's?" (I
starting with any num
add 9.)

Review Activity:

Objectives: The pupil

1) add and subtrac
30-30 to 90-30
resaming in 10'
2) add 1d column

Pages 33, 30-35, 40-45

Comments: 2 days (9th-1
Direct adding (subtrac
tens to tens, etc. T
basic facts. Use VIII

11th Day

Warm up:

"If we know 2+3 and 8-2, then we could know 20+30 and 820-200, because we can add and subtract 10's and 100's."

Review Activity:

Objectives: The pupils will be able to:

1) convert coins into different combinations
2) tell time to the five minutes

Pages 37-39

Comments: After doing some oral developmental work on time and money, Extra Practice page 298 has some good review. Continue verbal problems and keeping pupils skillful in the material covered. Use XI.

12th Day

Warm up:

"Could you add 3 numbers in your head? Raise your hand if you can tell me what 1+3+2 is?"

Review Activity:

Objectives: The pupil is able to solve a mixed set of problems.

Comments: Discovering More About Numbers, pages 320-325 is a good representation of mixed practice that can be discussed for board work and seat work. Use XII.

13th Day

Warm up:

"Are we keeping skills
about the basics addit

Review Activity:

Objectives: The pupil

1) solve mixed pro
2) respond to time

Comments: Experiences i
Final Practice, which co
excellent material on
could be presented ora

# 3rd Grade Lesson Sequence

3+3, ..., 9+9?"
es.

able to:
ciple of addition
ther manipulative
facts
mbers
n facts

to dramatize the
r lines and/or
ils' confidence when
"really" know.
Review Exercises III.

4th Day

Warm up:

"If 4+4 is 8, then what is 4+5? Oh, it's just one more!" Review doubles and their "one more."

Review Activity:

Objectives: The pupil will be able to:

1) write basic facts by completing frames in various positions
2) tell how he knows (verifies) the answers to basic facts
3) use vocabulary properly

Pages 11-14

Comments: Explore the use of the Extra Practice page 294 orally and as written work.

Use Review Exercises IV.

5th Day

Warm up:

"Did you know we now have reviewed 47 addition facts?" (+0, +1, +2, doubles, 1 more than doubles)

Review Activity:

Objectives: The pupil will be able to:

1) write a related addition sentence from an addition sentence
2) write a related subtraction sentence from an addition sentence
3) write a related addition sentence from a subtraction sentence

Pages 18-21, 26

Comments: For the pupil who has difficulty learning subtraction facts but is more confident with addition facts - the use of "families" of facts can be helpful. The child can be more successful if he "ties" on to the addition facts he knows when he subtracts.
Discovering More About Numbers, pages 321-322 can add to extending some ideas the pupils had covered in 2nd grade. Use V.

---

g 10, which is like
counting by 10's,
16, 26, ...; add 10;

e able to:
d to 3d+3d;
renaming and
n

eview place value.
nes to ones first,
good practice for

9th Day

Warm up:

"The only facts that we really haven't studied are 5+7, 5+8, 4+8, 6+3, 8+6, but you know those already, don't you?"

Review Activity:

Objectives: The pupils will be able to:

1) add and subtract: 2d+2d to 3d+3d; 2d-2d to 3d-2d without renaming and renaming in 10's column
2) add 1d column

Pages 31, 34-35, 46-49

Comments: Extra Practice pages 296-297. Some could be used for board work and some could be used for seatwork. Use IX.

10th Day

Warm up:

"Let's continue the review of the addition and subtraction facts we know."

Review Activity:

Objectives: The pupils will be able to:

1) use >, <, = to order whole numbers
2) use his knowledge of place value
3) demonstrate a mastery of basic addition and subtraction facts in timed tests
4) write and solve verbal problems

Pages: 1-7, 40-41 Basic Facts Sheets

Comments: This would be a good time to review the use of >, <, = and the idea of place value that have already been used. Continue work on verbal problems. The pupils should be gaining in speed and accuracy with Basic Facts. Periodic use of the District's Basic Facts sheets could keep pupils skillful. Before using any of the Basic Facts sheets, you could review those facts to be tested with the appropriate "flash cards." Use X.

---

n our basic facts? How
cts?"

e able to:

of basic facts

wery, level C by
available, has some
-9, parts of which
the class. Use XIII.

14th Day

Warm up:

"Do we really know the subtraction facts?"

Review Activity:

Objective:

Review.

Comments: Review and enrich. Continue work on verbal problems and keeping pupils skillful in computation. You could challenge your pupils on how much they remember about multiplication and division as they learned it in 2nd grade. Pages 168-174 is a good guide to the material they might have covered. Use XIV.

15th Day

District Test:

During the 5th week of school you will be asked to administer a District test which will be in standardized test format. The results will be analyzed on a district-wide basis giving us diagnostic capabilities to better provide for individual needs of our pupils.

For all intents and purposes your pupils should be ready to start Learning Stage 3. You may wish to use all or parts of the Learning Stage Test 2 and the book exams to learn specific need of pupils for review purposes.

Please begin Learning Stage 3. After the District test you may wish to review the items most missed by your pupils.

# WARM-UP ACTIVITIES

The following is a list of activities that could be used for the Warm Up at the beginning of the math period.

## Flash Card Use

Only the flash cards with the "facts of the day" and the previously learned facts should be used in order to reinforce the Basic Facts learned. If you wish to have all children respond to a given card, say, "Everybody think of the answer, when I raise my left hand, everybody answers quietly." (or all could write answers)

## Around the World

Two children compete with each other. The pupil who responds to the flash card first challenges the next child. Object is to get around the classroom.

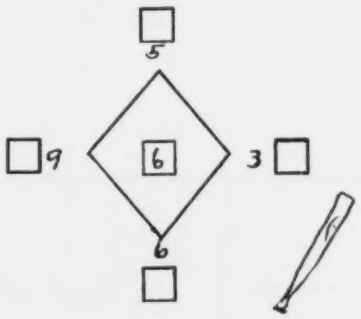
Variation: "Get to the back": A child in each row challenges each child in his row. "Flash" a card to row 1, another card to row 2, etc. Then back to row 1, 2, ... in rapid succession.

## I'm Thinking of a Number

Each row could be a team. Row 1 vs Row 2; Row 3 vs Row 4, etc. One from each team goes to the board and writes the answer to "I'm thinking that n+5=10, what is n?" Award points to team of winner. Then, next players to the board.

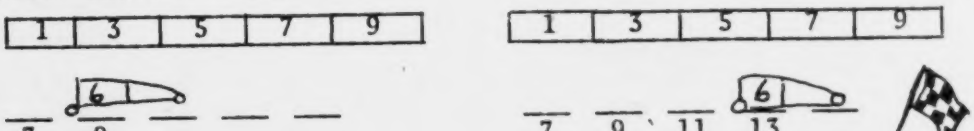
## Baseball

Each row a team. Add (subtract) to numbers on bases. Add 6 to each number. Each "batter" of each team says or writes answers. Award points.




## Dragstrip

Each row a team. Two "strips"
A member from each team writes answers. First one done gets point.




## Team vs Teacher




## Continuous problems

## Quizmo

## Other favorite games and activities

Division of Instructional Services
Unified School District No. 1 of Racine County
Racine, Wisconsin

Department of Mathematics

3rd Grade Review
Part 2

To: All Third Grade Teachers
Elementary School Principals

From: John D. Aceto, Consultant in Mathematics

Subject: Review Program for Computational Skills

The Mathematics Curriculum Guide for level 3 suggests that approximately 17 days be devoted to learning stages I and II. Since these two chapters encompass 61 pages, it would appear at first glance that this schedule is unrealistic, until one recognizes that these two learning stages are simply a review of level two material.

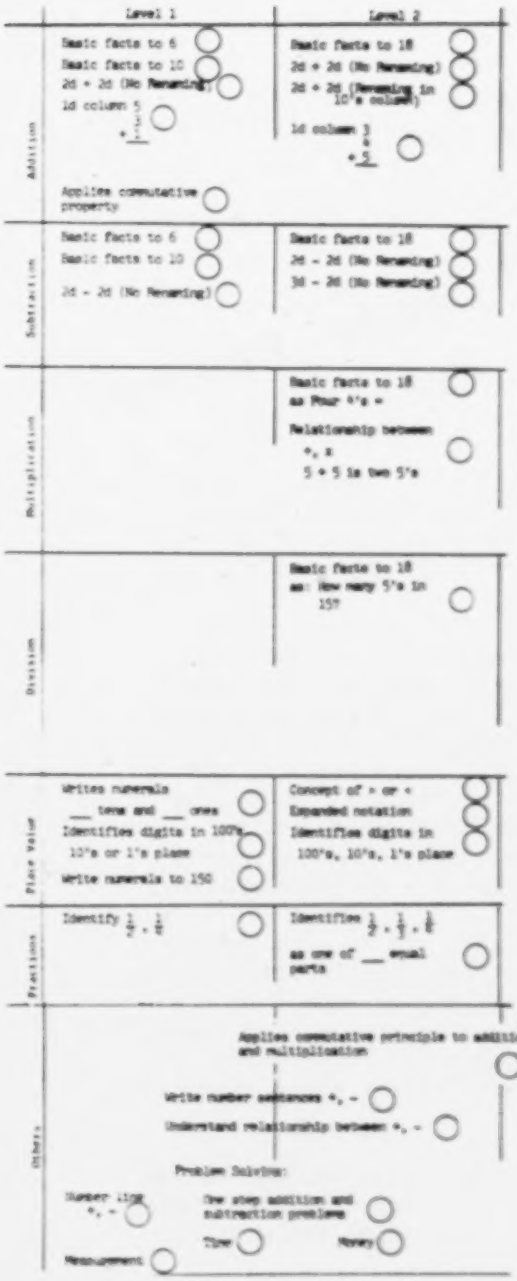
In order to complete this material in the recommended number of days, it is important to identify the particular mathematicsl objectives in these pages and to concentrate on them rather than a linear page-by-page progression through the book. This package consists of two parts: 1) a listing of specific second level objectives which should be reviewed during the first three weeks of the third grade, and 2) a set of exercises which test these objectives. It is suggested that this list of objectives be used to plan your arithmetic lessons during these first three weeks of school. At the end of this review of second grade objectives, a review test covering these objectives will be administered.

This material should be used during school weeks 2, 3, and 4. One review exercise should be given each day during this time. Either copy the exercises on the chalkboard or supply ditto sheets from a thermofax master made from the contents of this package. Have the pupils correct their solutions during class, discussing exercises causing trouble. Continue with your usual mathematics lesson using the suggested pages in the text as a guide to review these objectives. Try to identify deficiencies and clear them up.

During the fifth week you will be asked to give a test which will be in the standardized test format. The results will be analyzed on a district-wide basis giving us diagnostic capabilities to better provide for individual needs of our pupils.

After you have finished this review, you may wish to spend a day or two finishing up learning stages I and II. However, your students should be well prepared to plunge into learning stage III except for additional work with reading story problems, writing and solving number sentences for them. This skill should be covered throughout the year on an ongoing basis.

If I can render any assistance, please do not hesitate to call.




The chart at the left represents the exposure of the Computation component of our District's mathematics program for grades 1 and 2.

On the basis of the standardized mathematics test results and the second grade end-of-the-year test results your children are coming to you better prepared than were children a few years ago.

Last year's extremely good test scores at the 3rd grade level is a testimony to the outstanding job being done in math in the District. It does take constant effort and inspired teaching: you are to be commended.

## Time Division

Many teachers have found the time division at the right to be very effective.

Warm up is intended to stimulate pupils and maintain their skills in Basic Facts.

Development of Activities is the heart of the mathematics lesson when pupils are involved in learning, discovering, and exploring mathematics; practicing and refining understanding.

Review serves as instructional closure, maintaining problem solving skill, remediating, and enriching.

Math Class
Time Division

| |
|---|
| WARM UP |
| Developmental Activities and Practice |
| Review |
| Review Exercises |

---

## Basic Facts

To analyze facts needing practice, pupils could check (✓) those they know on an addition and subtraction table.

They could also make their own set of flash cards as they 'really' learn each fact.

Addition

| + | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 4 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 5 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 6 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 7 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 8 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 9 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

Subtraction

| − | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 4 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 5 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 6 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 7 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 8 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 9 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

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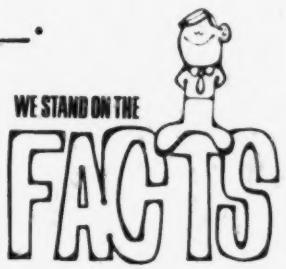
Racine, Wisconsin

NAME _____ SCORE _____

I. Review Exercises

1) 8, 9, ___, 11, ___, ___. 2) ___, 15, ___, ___.

3) $\begin{array}{r} 5 \\ +0 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +0 \\ \hline \end{array}$ $4 + 0 = \_\_\_$ $\begin{array}{r} 2 \\ +0 \\ \hline \end{array}$ $\begin{array}{r} 17 \\ +\ 0 \\ \hline \end{array}$ $\begin{array}{r} 0 \\ +6 \\ \hline \end{array}$




4) Using digits only, write numerals that mean:
a. 3 tens, 5 ones ☐ b. 8 tens, 3 ones ☐

5) 87 means ☐ tens ☐ ones

6) Which digit is in the tens' place in 963? ☐

7) Circle the smaller number in each pair:

a. 56, 46 b. 16, 61 c. 49, 47

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II. Review Exercises

1) $\begin{array}{r} 6 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +2 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ -1 \\ \hline \end{array}$ $\begin{array}{r} 1 \\ -1 \\ \hline \end{array}$

2) 347 means ☐ hundreds ☐ tens ☐ ones

3) a. 720 means ☐ hundreds ☐ tens ☐ ones

b. 720 means → ☐ tens ☐ ones

4) 146 = 100 + ☐ + 6

5) five hundred seventy-two ☐

6) 273 = 200 + ☐ + 3

7) How many places are in the numeral 463? ☐

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## III. Review Exercises

1) $\begin{array}{r} 4 \\ +4 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +6 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ +3 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +9 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +5 \\ \hline \end{array}$

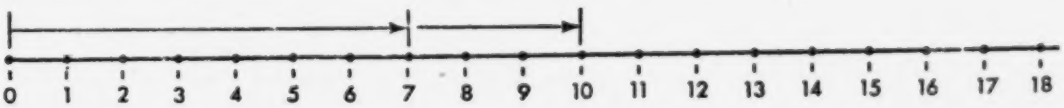
2) $9 + 4 = \square + 9$

3) $9 + 2 = \square$

4) $7 + 0 = \square$

5) $6 + 2 = \square$

6) Circle the even numbers: 3, 4, 21, 5, 32, 16




7) Write the addition sentence that tells about these two moves along the number line.

_____

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NAME _____ SCORE _____

## IV. Review Exercises

1) $\begin{array}{r} 4 \\ +5 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +7 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +9 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +8 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +6 \\ \hline \end{array}$ $\begin{array}{r} 3 \\ +4 \\ \hline \end{array}$

2) $5 + \square = 10$

3) $\square + 9 = 11$

4) $\square + 8 = 8$

5) $3 + \square = 5 + 3$

6) $5 + \square = 9$

7) $8 + \square = 17$

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Racine, Wisconsin

NAME _____ SCORE _____

V. Review Exercises

1) $\begin{array}{r} 6 \\ +0 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ -1 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +8 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +6 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +2 \\ \hline \end{array}$

2) $6 + 7 = \square$ $7 + 6 = \square$ $13 - 6 = \square$ $13 - 7 = \square$

3) $7 + 8 = \square$ $8 + 7 = \square$ $15 - 8 = \square$ $15 - 7 = \square$

4) $9 + \square = 11$ $\square + 9 = 11$ $11 - 9 = \square$ $11 - \square = 9$

Unified School District No. 1
Racine, Wisconsin

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NAME _____ SCORE _____

VI. Review Exercises

1) $\begin{array}{r} 6 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +2 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +6 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +8 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +1 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +6 \\ \hline \end{array}$

2) $10 - 5 = \square$ 3) $9 - 4 = \square$ 4) $8 - 6 = \square$

5) $7 - 7 = \square$ 6) $16 - 8 = \square$ 7) $12 - 6 = \square$

8) Joe caught 9 fish. He threw 5 of them back because they were too small. How many fish did he have then?

_____

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## VII. Review Exercises

1)

| | | | | | |
|---|---|---|---|---|---|
| 2 | 6 | 3 | 8 | 7 | 9 |
| +8 | +4 | +7 | +3 | +4 | +1 |
| ___ | ___ | ___ | ___ | ___ | ___ |

2) Six boys were playing ball. Four more boys came to play. Then how many boys were playing ball?

_____

Put a ring around the fraction which shows how much of the figure is shaded.

3)

$\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$

4)

$\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$

5)

$\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$

6)

$\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$

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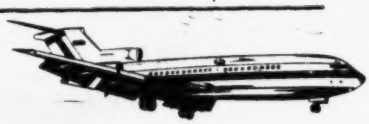

## VIII. Review Exercises

1)

| | | | | | |
|---|---|---|---|---|---|
| 7 | 7 | 3 | 3 | 10 | 9 |
| +10 | +9 | +10 | +9 | + 6 | +6 |
| ___ | ___ | ___ | ___ | ___ | ___ |

2)

| | | | | |
|---|---|---|---|---|
| 42 | 63 | 147 | 67 |
| +37 | +26 | +352 | +41 |
| ___ | ___ | ___ | ___ |

6)

| | | | |
|---|---|---|---|
| 79 | 98 | 87 | 968 |
| -65 | -47 | -44 | -534 |
| ___ | ___ | ___ | ___ |

10) 6 + 6 + 3 = ☐

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IX. Review Exercises

1) $\begin{array}{r} 8 \\ +5 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +5 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +3 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ +8 \\ \hline \end{array}$ $\begin{array}{r} 13 \\ -\ 5 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ -6 \\ \hline \end{array}$

2) $\begin{array}{r} 92 \\ +93 \\ \hline \end{array}$

3) $\begin{array}{r} 400 \\ +506 \\ \hline \end{array}$

4) $\begin{array}{r} 503 \\ +562 \\ \hline \end{array}$

5) $\begin{array}{r} 988 \\ -408 \\ \hline \end{array}$

6) $\begin{array}{r} 676 \\ -216 \\ \hline \end{array}$

7) $\begin{array}{r} 82 \\ +65 \\ \hline \end{array}$

8) $\begin{array}{r} 952 \\ - \\ \hline 850 \end{array}$

9) $\begin{array}{r} 118 \\ -\ 56 \\ \hline \end{array}$

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X. Review Exercises

1) $\begin{array}{r} 7 \\ +5 \\ \hline \end{array}$ $\begin{array}{r} 12 \\ -\ 5 \\ \hline \end{array}$ $\begin{array}{r} 18 \\ -\ 9 \\ \hline \end{array}$ $\begin{array}{r} 13 \\ -\ 8 \\ \hline \end{array}$ $\begin{array}{r} 10 \\ -\ 8 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ -6 \\ \hline \end{array}$

Use $>$ , $<$ or $=$ to make the sentence true.

2) $3 \square 5$

3) $18 \square 11$

4) $4 + 6 \square 6 + 4$

5) $20 + 30 \square 60$

6) $19 + 0 \square 19$

7) $221 \square 22$

8) $4 + 7 \square 4 + 8$

9) $9 \square 4 + 3 + 2$

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## XI. Review Exercises

1)

| | | | | | |
|---|---|---|---|---|---|
| 50 | 800 | 40 | 700 | 60 | 80 |
| +50 | −200 | +40 | +100 | −50 | −70 |

2) A dime and a penny is the same as _____ pennies.

3) A quarter and a dime is the same as _____ nickels.

4) 4 nickels are the same as _____ dimes.

5) 2 pennies and 3 dimes are the same as _____ pennies.

What times are shown?

6) _____

7) _____

8) _____

9) _____

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## XII. Review Exercises

1)

| | | | | | |
|---|---|---|---|---|---|
| 2 | 8 | 3 | 7 | 7 | 20 |
| 4 | 2 | 2 | 3 | 4 | 30 |
| +6 | +1 | +6 | +6 | +5 | +50 |

2) 96 +33

3) 157 − 97

4) 90 +83

5) 8 + ☐ = 12

6) 16 − ☐ = 9

7) 8 + 1 + 7 = ☐

8) Circle the largest number.

$\frac{1}{2}$, 2, 20

9) Joe has 110 pebbles. How many piles of ten can he make? ☐

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XIII. Review Exercises

1)

| | | | | | |
|---|---|---|---|---|---|
| 7 | 5 | 8 | 6 | 7 | 8 |
| +4 | +8 | +9 | +8 | +5 | +7 |

2) Which is greater 64 or 61? ☐

3) 10 - 3 = ☐

4) 2 + 2 = ☐

5) Mary has 42 sticks. How many bundles of ten sticks can she make? ☐

6) 2 + ☐ = 5 + 2

7) 6 + (2 + 7) = ☐

8) 235 means ___hundreds, _____tens, _____ones.

9) 476 = 400 + ☐ + 6

10) 906 - 500

11) Jim bought 12 cupcakes. He gave 4 of them to his friends. How many did he have left? ☐

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XIV. Review Exercises

1)

| | | | | | |
|---|---|---|---|---|---|
| 13 | 14 | 16 | 13 | 15 | 12 |
| - 7 | - 5 | - 9 | - 5 | - 8 | - 5 |

2) Three 5's = ☐

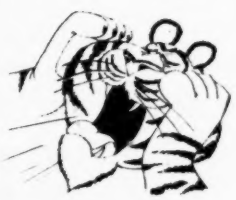
3) 3 + 3 + 3 + 3 is ☐ 3's

4) How many 5's in 15? ☐

5) Four 3's = ☐

6) How many 2's in 8? ☐

7) Two 9's = ☐



Guilford School District No. 1
Guilford, Wisconsin

## ANSWERS REVIEW EXERCISES — 3rd Grade

I. 1. 10, 12, 13 2. 14, 16, 17 3. 5, 7, 4, 2, 17, 6
4. a. 35 b. 83 5. 8, 7 6. 6
7. a. 46 b. 16 c. 47

---

II. 1. 7, 9, 11, 8, 7, 0 2. 3, 4, 7 3. a. 7, 2, 0 b. 72, 0
4. 40 5. 572 6. 70 7. 3

---

III. 1. 8, 12, 6, 8, 18, 10 2. 4 3. 11 4. 7 5. 8
6. 4, 32, 16 7. 7+3=10

---

IV. 1. 9, 13, 17, 15, 11, 7 2. 5 3. 2 4. 0
5. 5 6. 4 7. 9

---

V. 1. 6, 9, 4, 16, 11, 8 2. 13, 13, 7, 6
3. 15, 15, 7, 8 4. 2, 2, 2, 2

---

VI. 1. 7, 10, 12, 15, 9, 11 2. 5 3. 5 4. 2
5. 0 6. 8 7. 6 8. 4

---

VII. 1. 10, 10, 10, 11, 11, 10 2. 10 3. $\frac{1}{2}$ 4. $\frac{1}{3}$
5. $\frac{1}{2}$ 6. $\frac{1}{4}$

---

VIII. 1. 17, 16, 13, 12, 16, 15 2. 79 3. 89 4. 499
5. 108 6. 14 7. 51 8. 43 9. 434 10. 15

---

IX. 1. 13, 12, 9, 14, 8, 3 2. 185 3. 906 4. 1065
5. 580 6. 460 7. 147 8. 102 9. 62

---

X. 1. 12, 7, 9, 5, 2, 2 2. < 3. > 4. =
5. < 6. = 7. > 8. < 9. =

---

XI. 1. 100, 600, 80, 800, 10, 10 2. 11 3. 7
4. 2 5. 32 6. 7:30 7. 8:15 8. 6:00 9. 3:00

---

XII. 1. 12, 11, 11, 16, 16, 100 2. 129 3. 60 4. 173
5. 4 6. 7 7. 16 8. 20 9. 11

---

XIII. 1. 11, 13, 17, 14, 12, 15 2. 64 3. 7 4. 4
5. 4 6. 5 7. 15 8. 2,3,5 9. 70
10. 406 11. 8

---

XIV. 1. 6, 9, 7, 8, 7, 7 2. 15 3. 4 4. 3
5. 12 6. 4 7. 18

Division of Instructional Services
Unified School District No. 1 of Racine County
Racine, Wisconsin

Department of Mathematics

# 4th Grade Review

To: All Fourth Grade Teachers
Elementary School Principals

From: John D. Aceto, Consultant in Mathematics

Subject: Review Program for Mathematical Skills

We recognize that our pupils need a reminder of the Arithmetic skills learned in the previous year and practice to maintain those skills that were developed. The contents of this package has the primary objective of suggesting a planned sequential review of the skills that should have been achieved by your pupils last year.

This material should be used during school weeks 2, 3, and 4. One review exercise should be given each day during this time. Either copy the exercises on the chalkboard or supply ditto sheets from a thermofax master made from the contents of this package. Have the pupils correct their solutions during class, discussing exercises causing trouble. Continue with your usual mathematics lessons, but use these reviews as a guide assigning extra practice.

During the fifth week you will be asked to give a test which will be in the standardized test format and will be machine scored. The results will be analyzed on a district-wide basis with feedback for your class and each child giving us diagnostic capabilities to better provide for individual needs of our pupils.

If I can render any assistance, please do not hesitate to call.

## ANSWERS REVIEW EXERCISES — 4th Grade

I. 1. 3, 6, 7, 8, 8, 9, 10, 6, 7, 11 2. 2 3. 6 4. 9
5. 84 6. 1198 7. 689

---

II. 1. 10, 8, 11, 14, 16, 6, 12, 15, 7, 13 2. 6 3. 9
4. 7 5. 988 6. 997 7. 1179

---

III. 1. 10, 10, 10, 11, 11, 5, 6, 9, 7, 7 2. 447 3. 90
4. 1, 0, 5, 9 5. 6 6. 493

---

IV. 1. 16, 15, 18, 17, 16, 14, 12, 4, 5, 8 2. 4, 43
3. 7, 75 4. 3, 13 5. 5, 15 6. 40, 11

---

V. 1. 12, 14, 13, 9, 6, 15, 8, 8, 3, 3 2. 62 3. 87
4. 83 5. 785 6. 855 7. 963

---

VI. 1. 5, 9, 9, 5, 5, 5, 16, 11, 10, 13 2. 15 3. 38
4. 55 5. 519 6. 233 7. 335

---

VII. 1. 18, 11, 15, 14, 12, 100, 1300, 90 2. 880 3. 917
4. 707 5. 142 6. 107 7. 262

---

VIII. 1. 8, 4, 9, 4, 11, 15, 14, 19 2. 66 3. 2220
4. 553 5. 106

---

IX. 1. 25, 10, 12, 12, 12, 12, 15, 18 2. 20 3. 60
4. 24 5. 1200 6. 240 7. 18

---

X. 1. 6, 12, 10, 20, 28, 27, 3, 3 2. 7, 7, 7
3. 3 4. 2 5. 5 6. 5 7. 6

---

XI. 1. 11, 7, 16, 15, 9, 11, 7, 30, 2 2. 6, 200, 5, 205
3. 10, 150, 160 4. 126 5. 1869

---

XII. 1. 7, 10, 18, 14, 7, 12, 16, 24 2. 30, 1, 31
3. 11 4. 21 5. 22 6. 32

---

XIII. 1. 12, 17, 12, 11, 15, 13 2. $\frac{1}{6}$ 3. $\frac{3}{6}$
4. $\frac{1}{4}$ 5. $\frac{2}{3}(\frac{4}{6})$ 6. $\frac{1}{8}$ 7. $\frac{2}{6}$ 8. $\frac{3}{6}$
9. < 10. < 11. =

---

XIV. 1. 8, 7, 9, 5, 8, 5, 9, 9 2. 58 3. 96
4. 209 5. 5 6. 12 7. 2
8. 13 9. 6.94

---

4th Grade Review

## A Drill and Practice Format

This is a format that could be used as drill and practice for basic facts. The directions to be issued would be to add, or multiply, row one by the specified number.

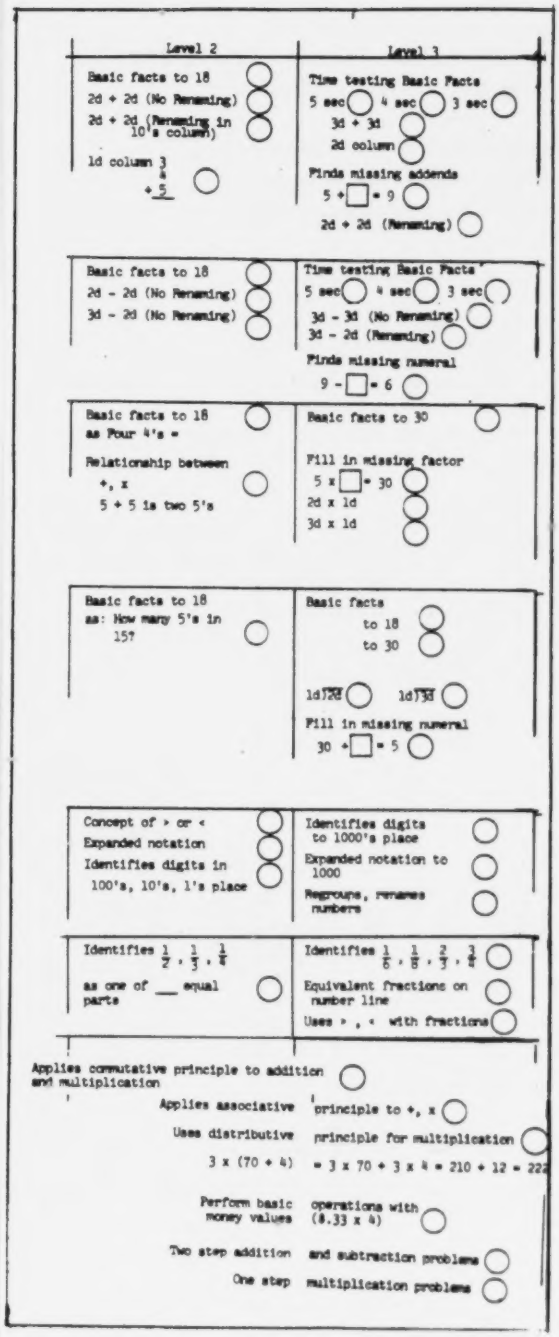
| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +3 | 6 | 8 | 10 | 9 | 3 | 4 | 5 | 11 | 13 | 7 | 12 | 103 |
| +9 | 12 | 14 | 16 | 15 | 9 | 10 | 11 | 17 | 19 | 13 | 18 | 109 |
| X2 | 6 | 10 | 14 | 12 | 0 | 2 | 4 | 16 | 20 | 8 | 18 | 200 |

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |


Level 2
Level 3
Basic facts to 18
2d + 2d (No Renaming)
2d + 2d (Renaming in 10's column)
1d column
Time testing Basic Facts
5 sec
4 sec
3 sec
3d + 3d
2d column
Finds missing addends
5 + □ = 9
2d + 2d (Renaming)
Basic facts to 18
2d - 2d (No Renaming)
3d - 2d (No Renaming)
Time testing Basic Facts
5 sec
4 sec
3 sec
3d - 3d (No Renaming)
3d - 2d (Renaming)
Finds missing numeral
9 - □ = 6
Basic facts to 18 as Four 4's =
Relationship between +, x
5 + 5 is two 5's
Basic facts to 30
Fill in missing factor
5 x □ = 30
2d x 1d
3d x 1d
Basic facts to 18 as: How many 5's in 15?
Basic facts to 18
to 30
1d)2d
1d)3d
Fill in missing numeral
30 ÷ □ = 5
Concept of > or <
Expanded notation
Identifies digits in 100's, 10's, 1's place
Identifies digits to 1000's place
Expanded notation to 1000
Regroups, renames numbers
Identifies 1/2, 1/3, 1/4 as one of ___ equal parts
Identifies 1/5, 1/8, 2/3, 3/4
Equivalent fractions on number line
Uses >, < with fractions
Applies commutative principle to addition and multiplication
Applies associative principle to +, x
Uses distributive principle for multiplication
3 x (70 + 4) = 3 x 70 + 3 x 4 = 210 + 12 = 222
Perform basic money values operations with (8.33 x 4)
Two step addition and subtraction problems
One step multiplication problems

The chart at the left represents the exposure of the Computation component of our District's mathematics program for grades 2 and 3.

On the basis of the standardized mathematics test results and the District's testing program your pupils are coming to you better prepared than were pupils a few years ago. Many of your pupils will have mastered the content of the first two chapters in the fourth grade book. This could give you an opportunity to insure knowledge of the topics in greater depth, polish skills and provide interesting enrichment.

Last year's fine test scores at the 5th grade level is a testimony to the outstanding job being done in math at the fourth grade level. It does take consistent effort and inspired teaching: you are to be commended.

## Time Division

Many teachers have found the time division at the right to be very effective.

Math Class Time Division

Warm Up

Developmental Activities and Practice

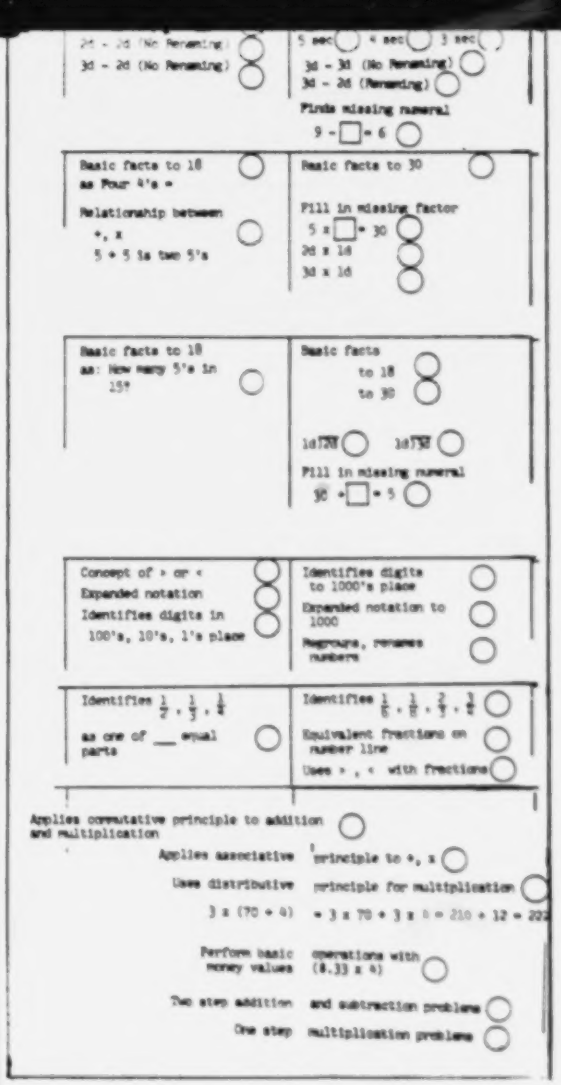
Review

Review Exercises

Warm Up is intended to stimulate pupils and maintain skills in Basic Facts. A two to five minute activity at the beginning of each math period is usually quite effective. These activities can take the form of contests, flash card drills, mental arithmetic and other game type activities.

Developmental Activities is the heart of the mathematics lesson when pupils are involved in learning, discovering and exploring mathematics; practicing and refining understanding.

Review serves as instructional closure; maintaining computational skills, maintaining problem solving skills, remediating, and enriching.

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## Time Division

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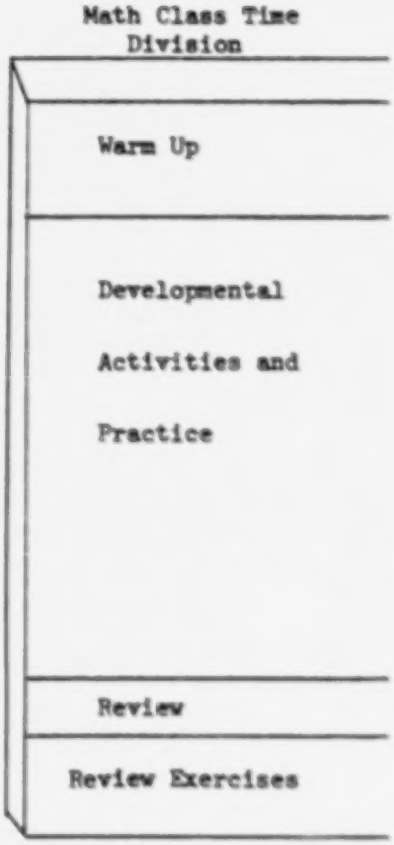


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Developmental Activities is the heart of the mathematics lesson when pupils are involved in learning, discovering and exploring mathematics; practicing and refining understanding.

Review serves as instructional closure; maintaining computational skills, maintaining problem solving skills, remediating, and enriching.

---

| + | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 4 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 5 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 6 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 7 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 8 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 9 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

Addition

## Basic Facts

To analyze facts needing practice, pupils could check (✓) those they know on an addition and multiplication table. They could also make their own set of flash cards as they 'really' learn each fact.

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2 | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 |
| 3 | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 |
| 4 | 0 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 |
| 5 | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
| 6 | 0 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 |
| 7 | 0 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 |
| 8 | 0 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 |
| 9 | 0 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 |

Multiplication

## 1st Day

Warm up:
"Within the next few days we will review the addition and subtraction facts at the beginning of each Math period. Let's see how well you know how to add 0,1,2,3 and subtract 1? (See Warm-Up Activities)
Note: Use +1, +2, +3, -1 facts in Activities.

Review:
Objectives: The pupil will be able to:
1) Add 2d +2d, 3d + 3d, no renaming
2) Write basic facts by completing frames in various positions

Comments: Problem 1 in each Review Exercise (below) will contain basic facts that you will have used in your Warm Up. Urge pupils to complete those quickly, to develop speed and accuracy. Use Review Exercises I as a culminating activity.

## 2nd Day

Warm up:
"Today we will not only use those easy facts in our warm up, but we will use the doubles and one more than the doubles. I know you know 5+5, then 5+6 is just one more. 7+7, 7+8, etc."

Review:
Objectives: The pupil will be able to:
1) Complete addition fact frames
2) Add 3d + 3d with no renaming

Comments: Review Exercises I and II are problems that extend basic facts. During these first weeks you may consider use of the District's Basic Facts sheets to keep pupils skillful. Before using any sheets, you could review those facts tested with appropriate "flash cards." Use Review Exercises II as a culminating activity.

cut-to make thermofax master

Name _____ Score _____

I. Review Exercises

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 5 | 6 | 6 | 5 | 7 | 9 | 4 | 6 | 8 |
| +0 | +1 | +1 | +2 | +3 | +2 | +1 | +2 | +1 | +3 |

2. 5 + ☐ = 7

3. ☐ + 3 = 9

4. ☐ + 2 = 11

5. 63 + 21

6. 985 + 213

7. 318 + 371

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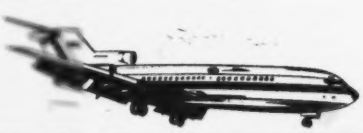
Name _____ Score _____



II. Review Exercises

2) Write basic facts by completing frames in various positions

Comments: Problem 1 in each Review Exercise (below) will contain basic facts that you will have used in your Warm Up. Urge pupils to complete those quickly, to develop speed and accuracy. Use Review Exercises I as a culminating activity.

1) Complete addition fact frames
2) Add 3d + 3d with no renaming

Comments: Review Exercises I and II are problems that extend basic facts. During these first weeks you may consider use of the District's Basic Facts sheets to keep pupils skillful. Before using any sheets, you could review those facts tested with appropriate "flash cards." Use Review Exercises II as a culminating activity.

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Name _____ Score _____

## I. Review Exercises

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3 | 5 | 6 | 6 | 5 | 7 | 9 | 4 | 6 | 8 |
| +0 | +1 | +1 | +2 | +3 | +2 | +1 | +2 | +1 | +3 |

2. 5 + ☐ = 7

3. ☐ + 3 = 9

4. ☐ + 2 = 11

5.
  63
+ 21

6.
  985
+ 213

7.
  318
+ 371

Unified School District No. 1
Racine, Wisconsin

Name _____ Score _____

## II. Review Exercises

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 6 | 7 | 8 | 3 | 6 | 7 | 4 | 7 |
| +5 | +4 | +5 | +7 | +8 | +3 | +6 | +8 | +3 | +6 |

2. 5 + ☐ = 11

3. ☐ + 8 = 17

4. ☐ + 6 = 13

5.
  325
+ 663

6.
  732
+ 265

7.
  534
+ 645

School District No. 1
ine, Wisconsin

3rd Day

Warm up:
"The 10s combinations are important: 6+4, 7+3, etc. If we really know those, then 8+3 is just one more than 8+2. As we keep getting better with addition facts, I'm going to be adding subtraction facts to the stack of flash cards of facts we know."

Review:
Objectives: The pupil will be able to:
1) Use expanded notation
2) Identify digits in 1000's, 100's, 10's, 1's place

Comments: A short review of Place Value will give you an indication of how much reinforcement is needed as you conduct the developmental phase of your class lessons in the coming days. Use III.

4th Day

Warm up:
"Adding 10 is like counting by 10s, adding 9 is just one less than adding 10. Which subtraction facts should be added to our stack?"

Review:
Objectives: The pupil will be able to:
1) Rename numbers to tens and ones places.

Comments: Review the renaming process as readiness for addition and subtraction with renaming. Explore using Extra Practice pages in the back of the math book. Consider page 296 as a possibility for oral and written work before or after using Review Exercise IV.

Name_____ Score_____

III. Review Exercises

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6 | 8 | 3 | 8 | 5 | 10 | 12 | 18 | 13 | 15 |
| + 4 | + 2 | + 7 | + 3 | + 6 | - 5 | - 6 | - 9 | - 6 | - 8 |

2. 400 + 40 + 7 = ☐

3. 492 = 400 + ☐ + 2

4. 1059 means ___thousand, ___hundreds, ___tens, ___ones.

5. What numeral is in the hundreds place in 9637? ☐

6. 4 hundreds, 9 tens, 3 ones written as a numeral is ☐

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Name_____ Score_____

IV. Review Exercises

2) Identify digits in 1000's, 100's, 10's, 1's place

Comments: A short review of Place Value will give you an indication of how much reinforcement is needed as you conduct the developmental phase of your class lessons in the coming days. Use III.

places.

Comments: Review the renaming process as readiness for addition and subtraction with renaming. Explore using Extra Practice pages in the back of the math book. Consider page 296 as a possibility for oral and written work before or after using Review Exercise IV.

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Name _____ Score _____

III. Review Exercises

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 6 | 8 | 3 | 8 | 5 | 10 | 12 | 18 | 13 | 15 |
| + 4 | + 2 | + 7 | + 3 | + 6 | - 5 | - 6 | - 9 | - 6 | - 8 |

2. 400 + 40 + 7 = ☐

3. 492 = 400 + ☐ + 2

4. 1059 means ___ thousand, ___ hundreds, ___ tens, ___ ones.

5. What numeral is in the hundreds place in 9637? ☐

6. 4 hundreds, 9 tens, 3 ones written as a numeral is ☐

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Racine, Wisconsin

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Name _____ Score _____

IV. Review Exercises

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10 | 9 | 8 | 8 | 7 | 5 | 9 | 6 | 9 | 17 |
| + 6 | + 6 | +10 | + 9 | + 9 | + 9 | + 3 | - 2 | - 4 | - 9 |

2. 3 tens + 13 ones = ☐ tens + 3 ones or ☐

3. 6 tens + 15 ones = ☐ tens + 5 ones or ☐

4. [43] 4 tens, ☐ ones or 3 tens, ☐ ones

5. [357] 3 hundreds, ☐ tens, 7 ones or 2 hundreds, ☐ tens, 7 ones.

6. [241] 200 + ☐ + 1 or 200 + 30 + ☐

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5th Day

Warm up:

"Do you have a way to remember 5+7, 5+8, 6+3, 8+6? How about subtraction facts like 12-9? Do the addition facts you really know help you remember the subtraction facts?"

Review Activity:

Objectives: The pupil will be able to:

1) Add 2d + 2d, 3d + 3d with renaming.

Comments: Addition with renaming is something your pupils have worked on hard and long in 3rd grade. The challenge now is to maintain proficiency and to constantly work on the "why" and develop skill. Use V.

6th Day

Warm up:

"Which facts are giving us trouble? Should we use only those facts that we have to work on in our Warm Up activity?"

Review Activity:

Objectives: The pupil will be able to:

1) Subtract 2d-2d, 3d-3d with renaming.

Comments: Subtraction with renaming has to constantly be reinforced. Use VI.

Name_____ Score_____

V. Review Exercises

1. $\begin{array}{r} 5 \\ +\ 7 \end{array}$ $\begin{array}{r} 6 \\ +\ 8 \end{array}$ $\begin{array}{r} 5 \\ +\ 8 \end{array}$ $\begin{array}{r} 6 \\ +\ 3 \end{array}$ $\begin{array}{r} 15 \\ -\ 9 \end{array}$ $\begin{array}{r} 7 \\ +\ 8 \end{array}$ $\begin{array}{r} 15 \\ -\ 7 \end{array}$ $\begin{array}{r} 5 \\ +\ 3 \end{array}$ $\begin{array}{r} 8 \\ -\ 5 \end{array}$ $\begin{array}{r} 12 \\ -\ 9 \end{array}$

2. $\begin{array}{r} 37 \\ +\ 25 \end{array}$

3. $\begin{array}{r} 18 \\ +\ 69 \end{array}$

4. $\begin{array}{r} 48 \\ +\ 35 \end{array}$

5. $\begin{array}{r} 429 \\ +\ 356 \end{array}$

6. $\begin{array}{r} 547 \\ +\ 308 \end{array}$

7. $\begin{array}{r} 268 \\ +\ 695 \end{array}$

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Name_____ Score_____

VI. Review Exercises

1. $\begin{array}{r} 12 \\ -\ 3 \end{array}$ $\begin{array}{r} 12 \\ -\ 4 \end{array}$ $\begin{array}{r} 17 \\ -\ 8 \end{array}$ $\begin{array}{r} 11 \\ -\ 2 \end{array}$ $\begin{array}{r} 14 \\ -\ 8 \end{array}$ $\begin{array}{r} 13 \\ -\ 9 \end{array}$ $\begin{array}{r} 9 \\ +\ 7 \end{array}$ $\begin{array}{r} 8 \\ +\ 3 \end{array}$ $\begin{array}{r} 6 \\ +\ 4 \end{array}$ $\begin{array}{r} 4 \\ +\ 9 \end{array}$

your pupils have worked on hard and long in 3rd grade. The challenge now is to maintain proficiency and to constantly work on the "why" and develop skill. Use V.

constantly be reinforced. Use VI.

Name _____ Score _____

## V. Review Exercises

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 6 | 5 | 6 | 15 | 7 | 15 | 5 | 8 | 12 |
| + 7 | + 8 | + 8 | + 3 | - 9 | + 8 | - 7 | + 3 | - 5 | - 9 |

2. 37 + 25

3. 18 + 69

4. 48 + 35

5. 429 + 356

6. 547 + 308

7. 268 + 695

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Name _____ Score _____

## VI. Review Exercises

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12 | 12 | 17 | 11 | 14 | 13 | 9 | 8 | 6 | 4 |
| - 7 | - 3 | - 8 | - 6 | - 9 | - 8 | + 7 | + 3 | + 4 | + 9 |

2. 39 - 24

3. 55 - 17

4. 90 - 35

5. 886 - 367

6. 731 - 498

7. 603 - 268

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## 7th Day

**Warm up:**
"We will continue to use the tough facts. Remember, if we know 2+3 and 8-2, then we would know 20+30 and 800-200 because we can add and subtract 10s and 100s!"

**Review Activity:**
Objectives: The pupil will be able to:
1) Add and subtract: 3d+2d to 3d+3d; 3d-3d with renaming

Comments: Extra Practice page 297 has possibilities for oral and board work and some written challenge. Use VII as a culminating activity.

## 8th Day

**Warm up:**
"Could you add 3 numbers in your head? Raise your hand if you can tell me what 6 + 3 + 8 is?"

**Review Activity:**
Objectives: The pupil will be able to:
1) Add 2d, 3d column
2) Write and solve verbal problems

Comments: In the Warm Up it is suggested to utilize "mental" arithmetic. One way to challenge higher ability children is to ask them to solve problems in their "head." Verbal problems appear for the first time in this Review. Verbal problems should be a part of almost every daily lesson. Use VIII.

Name _____ Score _____

VII. Review Exercises

1. $\begin{array}{r} 9 \\ +\ 9 \end{array}$ $\begin{array}{r} 6 \\ +\ 5 \end{array}$ $\begin{array}{r} 9 \\ +\ 6 \end{array}$ $\begin{array}{r} 6 \\ +\ 8 \end{array}$ $\begin{array}{r} 7 \\ +\ 5 \end{array}$ $\begin{array}{r} 30 \\ +\ 70 \end{array}$ $\begin{array}{r} 800 \\ +\ 500 \end{array}$ $\begin{array}{r} 160 \\ -\ 70 \end{array}$

2. $\begin{array}{r} 856 \\ +\ 24 \end{array}$

3. $\begin{array}{r} 131 \\ +\ 786 \end{array}$

4. $\begin{array}{r} 538 \\ +\ 169 \end{array}$

5. $\begin{array}{r} 874 \\ -\ 732 \end{array}$

6. $\begin{array}{r} 364 \\ -\ 257 \end{array}$

7. $\begin{array}{r} 814 \\ -\ 552 \end{array}$

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VIII. Review Exercises

1. 11 12 16 13 $\begin{array}{r} 6 \\ 3 \end{array}$ $\begin{array}{r} 3 \\ 7 \end{array}$ $\begin{array}{r} 5 \\ 4 \end{array}$ $\begin{array}{r} 6 \\ 9 \end{array}$

Comments: Extra Practice page 297 has possibilities for oral and board work and some written challenge. Use VII as a culminating activity.

Comments: In the Warm Up it is suggested to utilize "mental" arithmetic. One way to challenge higher ability children is to ask them to solve problems in their "head." Verbal problems appear for the first time in this Review. Verbal problems should be a part of almost every daily lesson. Use VIII.

Name _____ Score _____

## VII. Review Exercises

1. $9+9$ $\quad 6+5$ $\quad 9+6$ $\quad 6+8$ $\quad 7+5$ $\quad 30+70$ $\quad 800+500$ $\quad 160-70$

2. $856+24$

3. $131+786$

4. $538+169$

5. $874-732$

6. $364-257$

7. $814-552$

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## VIII. Review Exercises

1. $11-3$ $\quad 12-8$ $\quad 16-7$ $\quad 13-9$ $\quad 6+3+2$ $\quad 3+7+5$ $\quad 5+4+5$ $\quad 6+9+4$

2. $6+17+43$

3. $973+564+683$

4. James rode 432 miles by bus and 121 miles by train. How far did he go? ☐

5. In a dart game, John scored 43 points on the first try, 27 points on the second try and 36 points on the third try. What was his total score? ☐

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## 9th Day

**Warm up:**
"I don't want you to forget what you learned about multiplication in 3rd grade. Who can tell me what $3 \times 4$ means? How is multiplication like counting? like adding?" (products to 18)

**Review Activity:**
Objectives: The pupil will be able to:
1) Use the concept of multiplication to write basic multiplication facts.
2) Solve verbal problems using multiplication.

Comments: Some children already have a good grasp of multiplication facts. All children could be urged to use the repeated addition model or array-counting model to "figure" out multiplication. Use IX.

## 10th Day

**Warm up:**
"Are there more multiplication facts you remember or can figure out? Division facts?" (products to 30 only)

**Review Activity:**
Objectives: The pupil will be able to:
1) Use the concept of division to respond to division problems.
2) Solve verbal problems using division.

Comments: Review the "meaning" of division. Use X.

Note: Experiences in Discovery, Level C by Paul Trafton, which you have available and "Discovering More About Numbers" in the back of the book is a good source for enrichment for some or all pupils in your class.

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Name _____ Score _____

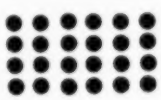
IX. Review Exercises

1.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 5 | 5 | 6 | 6 | 4 | 4 | 5 | 6 |
| x 5 | x 2 | + 6 | x 2 | + 4 | x 3 | x 3 | x 3 |

2. 4 x 5 means 4 fives or ☐

3. 3 x 20 means 20 + 20 + 20 or ☐

4. 4 x 6 means 4 sixes  or ☐

5. 4 x 3 = 12
   4 x 30 = 120
   4 x 300 = ☐

6. 3 x 8 = 24
   3 x 80 = ☐

7. There are 6 hot dogs in a package. How many are in 3 packages? ☐

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Name _____ Score _____

X. Review Exercises

1.

| | | | | | | |
|---|---|---|---|---|---|---|
| 3 | 3 | 5 | 5 | 7 | 9 | 12 ÷ 4 = ☐ |
| x 2 | x 4 | x 2 | x 4 | x 4 | x 3 | 15 ÷ 5 = ☐ |

...to write basic multiplication facts.
2) Solve verbal problems using multiplication.

Comments: Some children already have a good grasp of multiplication facts. All children could be urged to use the repeated addition model or array-counting model to "figure" out multiplication. Use IX.

...respond to division problems.
2) Solve verbal problems using division.

Comments: Review the "meaning" of division. Use X.

Note: Experiences in Discovery, Level C by Paul Trafton, which you have available and "Discovering More About Numbers" in the back of the book is a good source for enrichment for some or all pupils in your class.

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Name _____ Score _____

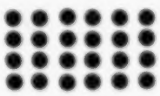
IX. Review Exercises

1.

| 5 | 5 | 6 | 6 | 4 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| x 5 | x 2 | + 6 | x 2 | + 4 | x 3 | x 3 | x 3 |

2. 4 x 5 means 4 fives or ☐

3. 3 x 20 means 20 + 20 + 20 or ☐

4. 4 x 6 means 4 sixes  or ☐

5. 4 x 3 = 12
   4 x 30 = 120
   4 x 300 = ☐

6. 3 x 8 = 24
   3 x 80 = ☐

7. There are 6 hot dogs in a package. How many are in 3 packages? ☐

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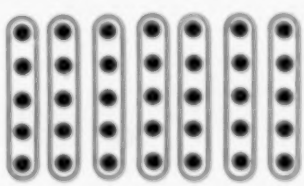
Name _____ Score _____

X. Review Exercises

1.

| 3 | 3 | 5 | 5 | 7 | 9 |
|---|---|---|---|---|---|
| x 2 | x 4 | x 2 | x 4 | x 4 | x 3 |

12 ÷ 4 = ☐ 15 ÷ 5 = ☐

2. 35 ÷ 5 means "how many 5's are in 35  or ☐
   ( ☐ fives or ☐ x 5 = 35)

3. 60 ÷ 20 = ☐

4. $6\overline{)12}$ 5. $2\overline{)10}$ 6. $5\overline{)25}$

7. Jim had 30 cookies. He gave an equal number to his 5 friends. How many did each get? ☐

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## 11th Day

**Warm up:**
"In our Warm Up activities, I'm going to choose basic facts from adding, subtraction, multiplication or division."

**Review Activity:**
Objectives: The pupil will be able to:
1) Compute 2d x 1d using horizontal and vertical method.

Comments: Multiplication is a nice vehicle to review place value, distributive property and addition. Not many pupils have mastered multiplication or division. Supply them with a model to follow and urge them to check by repeated addition to build confidence. Use XI.

## 12th Day

**Warm up:**
"We will continue to keep skillful with basic facts."

**Review Activity:**
Objectives: The pupil will be able to:
1) Compute 2d ÷ 1d using horizontal and ladder method.

Comments: Have pupils check results by multiplication thru repeated addition to assure the pupils know what division "means."

Name_____ Score_____

XI. Review Exercises

1. $\begin{array}{r} 8 \\ +\,3 \end{array}$ $\begin{array}{r} 16 \\ -\,9 \end{array}$ $\begin{array}{r} 4 \\ \times\,4 \end{array}$ $\begin{array}{r} 9 \\ +\,6 \end{array}$ $\begin{array}{r} 18 \\ -\,9 \end{array}$ $\begin{array}{r} 5 \\ +\,6 \end{array}$ $\begin{array}{r} 12 \\ -\,5 \end{array}$ $\begin{array}{r} 5 \\ \times\,6 \end{array}$ $18 \div 9 = \square$

2. $6 \times 51 = (6 \times 50) + (6 \times 1)$
$= \boxed{300} + \square = \boxed{306}$

$5 \times 41 = (5 \times 40) + (5 \times 1)$
$= \square + \square = \square$

3. $\begin{array}{r} 47 \\ \times\,3 \\ \hline 21 \\ 120 \\ \hline 141 \end{array}$ $\begin{array}{r} 32 \\ \times\,5 \\ \hline \square \\ \square \\ \hline \square \end{array}$

4. $\begin{array}{r} 21 \\ \times\,6 \end{array}$

5. $\begin{array}{r} 242 \\ \times\,6 \\ \hline 12 \\ 240 \\ 1200 \\ \hline 1452 \end{array}$ $\begin{array}{r} 623 \\ \times\,3 \end{array}$

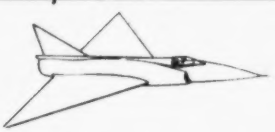
Name_____ Score_____

XII. Review Exercises

Comments: Multiplication is a nice vehicle to review place value, distributive property and addition. Not many pupils have mastered multiplication or division. Supply them with a model to follow and urge them to check by repeated addition to build confidence. Use XI.

Comments: Have pupils check results by multiplication thru repeated addition to assure the pupils know what division "means."

Name_____ Score_____



## XI. Review Exercises

1. $\begin{array}{r} 8 \\ +\,3 \\ \hline \end{array}$ $\begin{array}{r} 16 \\ -\,9 \\ \hline \end{array}$ $\begin{array}{r} 4 \\ \times\,4 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +\,6 \\ \hline \end{array}$ $\begin{array}{r} 18 \\ -\,9 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ +\,6 \\ \hline \end{array}$ $\begin{array}{r} 12 \\ -\,5 \\ \hline \end{array}$ $\begin{array}{r} 5 \\ \times\,6 \\ \hline \end{array}$ $18 \div 9 = \square$

2. $6 \times 51 = (6 \times 50) + (6 \times 1)$

$= \boxed{300} + \square = \boxed{306}$

$5 \times 41 = (5 \times 40) + (5 \times 1)$

$= \square + \square = \square$

3. $\begin{array}{r} 47 \\ \times\,3 \\ \hline 21 \\ 120 \\ \hline 141 \end{array}$ $\begin{array}{r} 32 \\ \times\,5 \\ \hline \square \\ \square \\ \hline \square \end{array}$

4. $\begin{array}{r} 21 \\ \times\,6 \\ \hline \end{array}$

5. $\begin{array}{r} 242 \\ \times\,6 \\ \hline 12 \\ 240 \\ 1200 \\ \hline 1452 \end{array}$ $\begin{array}{r} 623 \\ \times\,3 \\ \hline \end{array}$

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Name_____ Score_____

## XII. Review Exercises

1. $\begin{array}{r} 6 \\ +\,1 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ +\,2 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ +\,9 \\ \hline \end{array}$ $\begin{array}{r} 7 \\ +\,7 \\ \hline \end{array}$ $\begin{array}{r} 14 \\ -\,7 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ \times\,2 \\ \hline \end{array}$ $\begin{array}{r} 8 \\ \times\,2 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ \times\,4 \\ \hline \end{array}$

2. $46 \div 2 = (40 \div 2) + (6 \div 2)$

$= 20 + 3 = 23$

$93 \div 3 = (90 \div 3) + (3 \div 3)$

$\square + \square = \square$

3. $44 \div 4 =$

4. $4\overline{)84}$

$\begin{array}{r|l} 80 & 20 \\ \hline 4 & \\ 4 & 1 \\ \hline 0 & 21 \end{array}$

$21$

$4\overline{)84}$

5. $4\overline{)88}$

6. $3\overline{)96}$

$3\overline{)63}$

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13th Day

Warm up:
"Which facts should we use in our activities today?"

Review Activity:
Objectives: The pupil will be able to:
1) Recognize and write fractional parts.
2) Write equivalent fraction using the number line.
3) Order fractions.

Comments: Page 303 could be used as an oral review. Use XIII.

14th Day

Warm up:
"How about just subtraction facts today?"

Review Activity:
Objectives: The pupil will be able to:
1) Solve a mixed set of problems.

Comments: Review and enrich. Continue work on verbal problems and keep pupils skillful in computation and basic facts. Use XIV.

Name _____ Score _____

## XIII. Review Exercises

1.

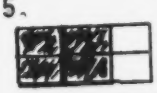
| | | | | | |
|---|---|---|---|---|---|
| 4 | 6 | 2 | 7 | 8 | 6 |
| 2 | 8 | 5 | 2 | 4 | 4 |
| + 6 | + 3 | + 5 | + 2 | + 3 | + 3 |
| ___ | ___ | ___ | ___ | ___ | ___ |

For Problems 2 to 6, choose the fraction that represents the shaded part. Choose your answers from this set. $\{\frac{1}{8}, \frac{1}{6}, \frac{1}{4}, \frac{1}{2}, \frac{3}{8}, \frac{5}{8}, \frac{2}{3}, \frac{3}{4}\}$

2. ☐

3. ☐

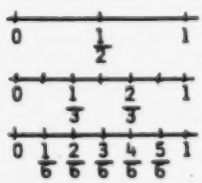
4. ☐

5.  ☐

6. ☐

Use the number line below to write another name for

7. $\frac{1}{3}$ ☐ 8. $\frac{1}{2}$ ☐




Place a <, >, or = in the ☐ to make the sentence true.

9. $\frac{1}{3}$ ☐ $\frac{1}{2}$ 10. $\frac{1}{2}$ ☐ $\frac{2}{3}$ 11. $\frac{2}{3}$ ☐ $\frac{4}{6}$

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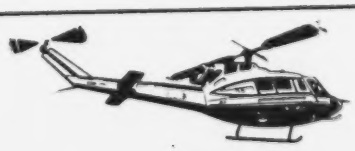


## XIV. Review Exercises

1.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11 | 12 | 14 | 11 | 12 | 14 | 18 | 16 |
| | | | | | | | |
| | | | | | | | |
| | | | | | | |

number line.
3) Order fractions.

Comments: Page 303 could be used as an oral review. Use XIII.

Comments: Review and enrich. Continue work on verbal problems and keep pupils skillful in computation and basic facts. Use XIV.

Name _____ Score _____

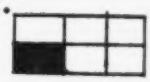
## XIII. Review Exercises

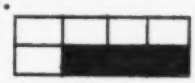
1.

| | | | | | |
|---|---|---|---|---|---|
| 4 | 6 | 2 | 7 | 8 | 6 |
| 2 | 8 | 5 | 2 | 4 | 4 |
| + 6 | + 3 | + 5 | + 2 | + 3 | + 3 |
| ___ | ___ | ___ | ___ | ___ | ___ |

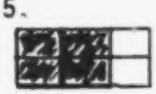
face the FACTS

For Problems 2 to 6, choose the fraction that represents the shaded part. Choose your answers from this set. $\{\frac{1}{8}, \frac{1}{6}, \frac{1}{4}, \frac{1}{2}, \frac{3}{8}, \frac{5}{8}, \frac{2}{3}, \frac{3}{4}\}$

2.  ☐

3.  ☐

4. ☐

5.  ☐

6. ☐

Use the number line below to write another name for

7. $\frac{1}{3}$ ☐ 8. $\frac{1}{2}$ ☐

Place a <, >, or = in the ☐ to make the sentence true.

9. $\frac{1}{3}$ ☐ $\frac{1}{2}$ 10. $\frac{1}{2}$ ☐ $\frac{2}{3}$ 11. $\frac{2}{3}$ ☐ $\frac{4}{6}$

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Name _____ Score _____

## XIV. Review Exercises

1.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 11 | 12 | 14 | 11 | 12 | 14 | 18 | 16 |
| - 3 | - 5 | - 5 | - 6 | - 4 | - 9 | - 9 | - 7 |
| ___ | ___ | ___ | ___ | ___ | ___ | ___ | ___ |

2. $23 + \square = 81$

3. $32 \times 3$ = ___

4. $738 - 529$ = ___

5. $27 - \square = 22$

6. $7\overline{)84}$

7. $30 \div \square = 15$

8. 237 = 1 hundred, ____ tens, 7 ones.

9. Peter had $4.89 in his bank. He then earned $.60 for mowing a lawn and $1.45 for cleaning the garage. After he put his earnings in the bank, how much did he have totally?

$ ☐

Unified School District No. 1
Racine, Wisconsin

Division of Instructional Services
Unified School District No. 1 of Racine County
Racine, Wisconsin

Department of Mathematics

5th Grade Review

To: All Fifth Grade Teachers
Elementary School Principals

From: John D. Aceto, Consultant in Mathematics

Subject: Review Program for Mathematical Skills

We recognize that our pupils need a reminder of the Arithmetic skills learned in the previous year and practice to maintain those skills that were developed. The contents of this package has the primary objective of suggesting a planned sequential review of the skills that should have been achieved by your pupils last year.

This material should be used during school weeks 2, 3, and 4. One review exercise should be given each day during this time. Either copy the exercises on the chalkboard or supply ditto sheets from a thermofax master made from the contents of this package. Have the pupils correct their solutions during class, discussing exercises causing trouble. Continue with your usual mathematics lessons, but use these reviews as a guide assigning extra practice.

During the fifth week you will be asked to give a test which will be in the standardized test format and will be machine scored. The results will be analyzed on a district-wide basis with feedback for your class and each child giving us diagnostic capabilities to better provide for individual needs of our pupils.

If I can render any assistance, please do not hesitate to call.

## Answers Review Exercises — 5th Grade

I. 1. 4, 6, 8, 7, 1, 2, 9, 3, 11, 5, 10, 101
6, 8, 10, 9, 3, 4, 11, 5, 13, 7, 12, 103
5, 7, 9, 8, 2, 3, 10, 4, 12, 6, 11, 102
2. 4, 43 3. 8, 84 4. 3, 13 5. 50, 150 6. 40, 11 7. 0, 100

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II. 1. 10, 8, 11, 18, 16, 14, 15, 12, 7, 13
2. 77 3. 85 4. 171
5. 1306 6. 746.23 7. 148

---

III. 1. 13, 15, 17, 16, 10, 11, 12, 18, 20, 14, 19, 110
12, 14, 16, 15, 9, 10, 11, 17, 19, 13, 18, 109
2. 11, 11, 4
3. 6 4. 333 5. 2324 6. 6415 7. 558 8. $2.32

---

IV. 1. 12, 14, 13, 9, 6, 15, 8, 8, 3, 3
2. 916 3. 1522 4. 246
5. 1058 6. 1900 7. 6143 8. 1987

---

V. 1. 5, 9, 9, 5, 5, 5, 16, 11, 10, 13
2. $\frac{4}{5}$ 3. $\frac{1}{2}$ 4. $\frac{2}{5}$
5. $\frac{7}{12}$ 6. $1\frac{4}{5}$ ton 7. $\frac{1}{2}$ yd.

---

VI. 1. 6, 10, 14, 12, 0, 2, 4, 16, 20, 8, 18, 200
12, 20, 28, 24, 0, 4, 8, 32, 40, 16, 36, 400
15, 25, 35, 30, 0, 5, 10, 40, 50, 20, 45, 500
2. 224 3. 288
4. 380 5. 144
6. 1842 7. 320

---

VII. 1. 9, 15, 21, 18, 0, 3, 6, 24, 30, 12, 27
27, 45, 63, 54, 0, 9, 18, 72, 90, 36, 81
15, 23, 31, 27, 3, 7, 11, 35, 43, 19, 39
2. 96 3. 603 4. 196
5. 711 6. 1281 7. 2511

---

VIII. 1. 9, 15, 21, 18, 0, 3, 6, 24, 30, 12, 27, 300
18, 30, 42, 36, 0, 6, 12, 48, 60, 24, 54, 600
19, 29, 39, 34, 4, 9, 14, 44, 54, 24, 49, 504
2. 144 3. 720 4. 864
5. 5394 6. 7 7. 399

---

IX. 1. 12, 20, 28, 24, 0, 4, 32, 8, 40, 16, 36, 400
24, 40, 56, 48, 0, 8, 64, 16, 80, 32, 72, 800
11, 17, 23, 20, 2, 5, 26, 8, 32, 14, 29, 302
2. 3020 3. 744
4. 3395 5. 12, 120, 1200
6. 48, 480, 4800 7. 1120

---

X. 1. 21, 35, 49, 42, 0, 7, 56, 14, 70, 28, 63, 700
27, 45, 63, 54, 0, 9, 72, 18, 90, 36, 81, 900
12, 14, 16, 15, 9, 10, 17, 11, 19, 13, 18, 109
2. 7, 9, 7, 7, 6, 9 3. 21
4. 61 5. 56
6. 6 7. 17

---

XI. 1. 90, 150, 210, 180, 0, 30, 60, 240, 300, 120, 270, 3000
120, 200, 280, 240, 0, 40, 80, 320, 400, 160, 360, 4000
30, 48, 66, 57, 3, 12, 21, 75, 93, 39, 84, 903
2. 7R2 3. 18R2
4. 61R3 5. 45R4
6. 205, 408, 168 7. 9

---

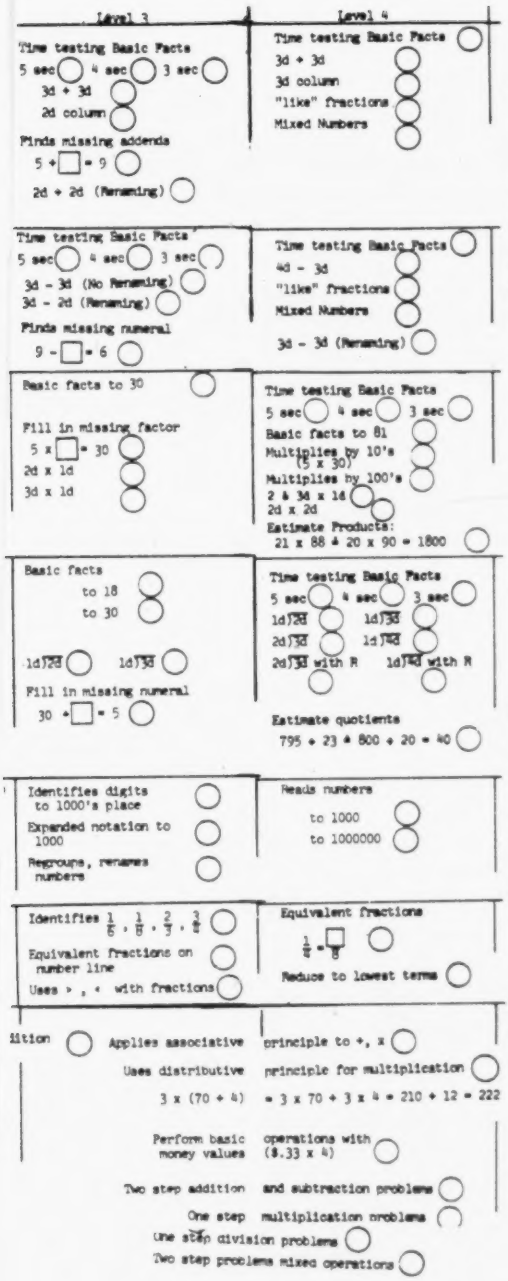
XII. 1. 15, 8, 54, 7, 56, 42, 9, 8, 9, 1100
2. 8 3. 7R57
4. 8 5. 4R6 6. 4R6

---

XIII. 1. 18, 30, 42, 36, 0, 6, 12, 48, 60, 24, 54, 600
24, 40, 56, 48, 0, 8, 16, 64, 80, 32, 72, 800
10, 12, 14, 13, 7, 8, 9, 15, 17, 11, 16, 107
2. 530 3. 10
4. 5 5. 46.80
6. 4824 7. 7 8. .61

---

XIV. 1. 8, 7, 9, 5, 8, 5, 5, 9, 9, 9
2. 41 3. 4 4. 4R2
5. 6349 6. 8R24 7. $\frac{1}{4}$
8. 46434 9. 8148




The chart at the left represents the exposure of the Computation component of our District's mathematics program for grades 3 and 4.

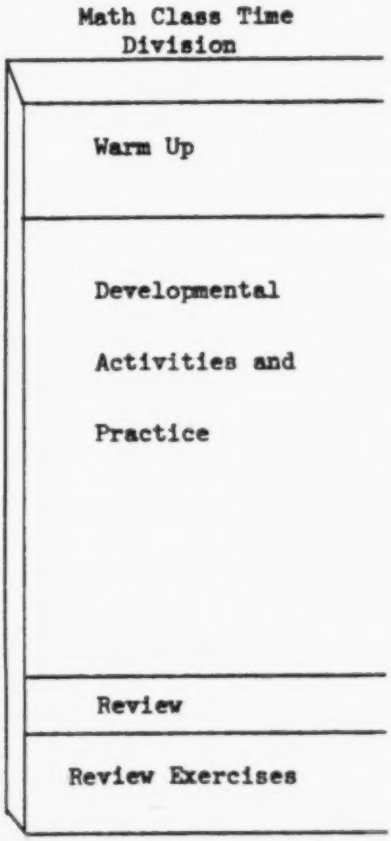
Last year's fine test scores at the 5th grade level and at the 6th grade level are a testimony to the outstanding job being done in math at the 5th grade level. It does take consistent effort and inspired teaching: you are to be commended.

## Time Division

Many teachers have found the time division at the right to be very effective.

Warm Up is intended to stimulate pupils and maintain skills in Basic Facts. A two to five minute activity at the beginning of each math period is usually quite effective. These activities can take the form of contests, flash card drills, mental arithmetic and other game type activities.

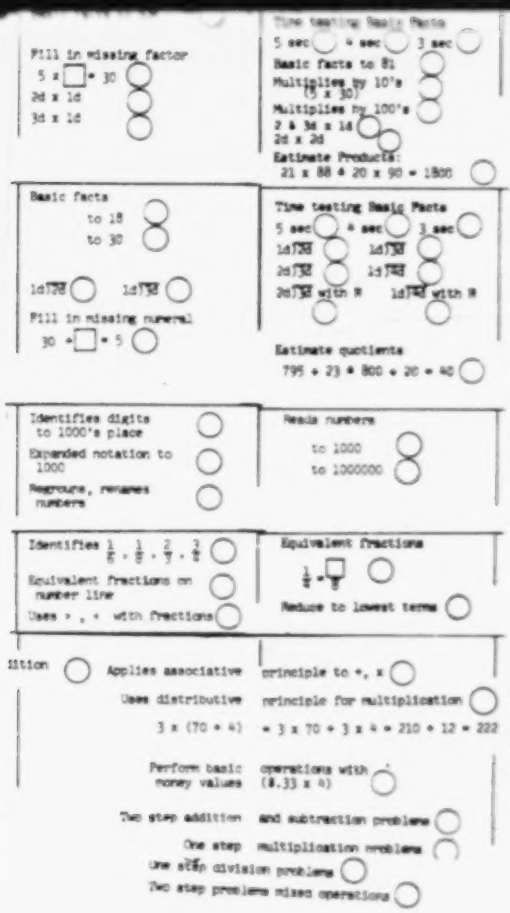
Developmental Activities is the heart of the mathematics lesson when pupils are involved in learning, discovering and exploring mathematics; practicing and refining understanding.




Review serves as instructional closure; maintaining computational skills, maintaining problem solving skills, remediating, and enriching.

The written review activity could be used at any appropriate time during the math period, but should probably be used after some developmental oral and/or written activity that reviews the concepts and skills that are represented in the activity. The review activities could give you some feedback as to how well your pupils understand the material presented and what needs they have for reteaching and reinforcement at this time or when it comes up during the year again.

After a general explanation of what is involved in the written review activity




## Time Division

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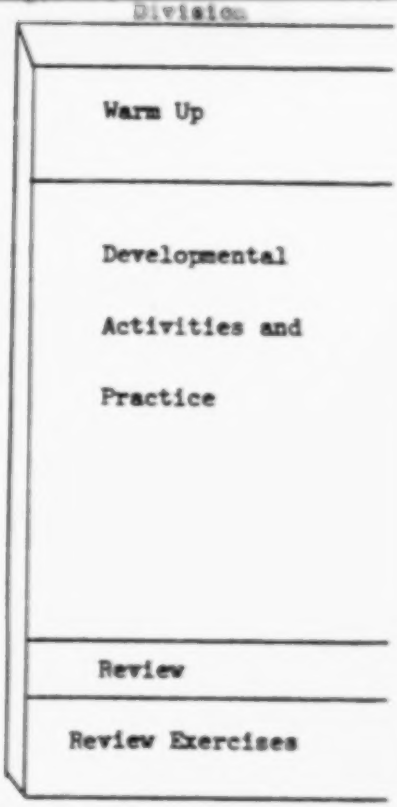


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The written review activity could be used at any appropriate time during the math period, but should probably be used after some developmental oral and/or written activity that reviews the concepts and skills that are represented in the activity. The review activities could give you some feedback as to how well your pupils understand the material presented and what needs they have for reteaching and reinforcement at this time or when it comes up during the year again.

After a general explanation of what is involved in the written review activity, pairs of pupils, small groups as well as individual pupils, could complete the activity. Pupil presentations of correct solutions on the chalkboard after completion is also effective. These reviews are to remind and maintain skills and not tests.

- - - -

5th Grade Review

## A Drill and Practice Format

This is a format that could be used as drill and practice for basic facts. The directions to be issued would be to add, or multiply, row one by the specified number.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +3 | 6 | 8 | 10 | 9 | 3 | 4 | 5 | 11 | 13 | 7 | 12 | 103 |
| +9 | 12 | 14 | 16 | 15 | 9 | 10 | 11 | 17 | 19 | 13 | 18 | 109 |
| X2 | 6 | 10 | 14 | 12 | 0 | 2 | 4 | 16 | 20 | 8 | 18 | 200 |

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |

## 1st Day

**Warm Up:**

"Within the next few days we will review the Basic Facts at the beginning of each Math period. Let's see how well you know how to add 0, 1, 2, 3 and subtract 1?"

Note: Use +1, +2, +3, -1 facts in Warm Up Activities.

**Review Activities:**

Objective: The pupil will be able to rename numbers to tens and ones place.

**Comments:** Problem 1 in each Review Exercise (below) will contain Basic Facts that you will have used in your Warm Up. Urge pupils to complete those quickly to develop speed and accuracy. The exercises are readiness problems for addition and subtraction algorithm. Use Review Exercises I as a culminating activity.

## 2nd Day

**Warm Up:**

"Today we will not only use those easy facts in our warm up, but we will use the doubles and one more than the doubles. I know you know 5 + 5, then 5 + 6 is just one more. 7 + 7, 7 + 8, etc."

**Review Activities:**

Objective: The pupil will be able to add with and without renaming.

**Comments:** Regrouping in addition is fundamental by this level. Pupils should be working toward speed and accuracy. "Word problems" will appear regularly in the Review reminding you that Problem Solving must be emphasized continually. The completed problem in the "box" will give some rationale to the pupil on "how to do" the problems.

cut-to make thermofax master

## I. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +1 | | | 8 | | | | | | | | | |
| +3 | | | | | | | 5 | | | | | |
| +2 | | | | | | | | | | | | 102 |

2. 3 tens + 13 ones = ☐ tens + 3 ones or ☐

3. 7 tens + 14 ones = ☐ tens + 4 ones or ☐

4. [43] 4 tens, ☐ ones or 3 tens, ☐ ones

5. [357] 300 + ☐ + 7 or 200 + ☐ + 7

6. [241] 200 + ☐ + 1 or 200 + 30 + ☐

7. [903] 900 + ☐ + 3 or 800 + ☐ + 3

**Renaming Numbers**

$$\begin{array}{r} {}^{2}\not{4}{}^{1}\not{3}1 \\ -\ 126 \\ \hline \end{array}$$

$$\begin{array}{r} {}^{1}\phantom{0}67 \\ +\ 23 \\ \hline 0 \end{array}$$

Unified School District No. 1
Racine, Wisconsin

## II. Review Exercises

NAME _____
SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 6 | 9 | 8 | 7 | 7 | 6 | 4 | 7 |
| +5 | +4 | +5 | +9 | +8 | +7 | +8 | +6 | +3 | +6 |

Objective: The pupil will be able to rename numbers to tens and ones place.

Comments: Problem 1 in each Review Exercise (below) will contain Basic Facts that you will have used in your Warm Up. Urge pupils to complete those quickly to develop speed and accuracy. The exercises are readiness problems for addition and subtraction algorithm. Use Review Exercises I as a culminating activity.

Objective: The pupil will be able to add with and without renaming.

Comments: Regrouping in addition is fundamental by this level. Pupils should be working toward speed and accuracy. "Word problems" will appear regularly in the Review reminding you that Problem Solving must be emphasized continually. The completed problem in the "box" will give some rationale to the pupil on "how to do" the problems.

cut-to make thermofax master

## I. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +1 | | | 8 | | | | | | | | | |
| +3 | | | | | | | 5 | | | | | |
| +2 | | | | | | | | | | | | 102 |

**Renaming Numbers**

$$\begin{array}{r} {}^{2}\not{4}{}^{1}31 \\ -\ 126 \\ \hline \end{array}$$

$$\begin{array}{r} {}^{1}67 \\ +\ 23 \\ \hline 0 \end{array}$$

2. 3 tens + 13 ones = ☐ tens + 3 ones or ☐

3. 7 tens + 14 ones = ☐ tens + 4 ones or ☐

4. [43] 4 tens, ☐ ones or 3 tens, ☐ ones

5. [357] 300 + ☐ + 7 or 200 + ☐ + 7

6. [241] 200 + ☐ + 1 or 200 + 30 + ☐

7. [903] 900 + ☐ + 3 or 800 + ☐ + 3

Unified School District No. 1
Racine, Wisconsin

## II. Review Exercises

NAME _____
SCORE _____

1.

$$\begin{array}{rrrrrrrrrr} 5 & 4 & 6 & 9 & 8 & 7 & 7 & 6 & 4 & 7 \\ +5 & +4 & +5 & +9 & +8 & +7 & +8 & +6 & +3 & +6 \\ \hline \end{array}$$

2. $\begin{array}{r} 24 \\ +53 \\ \hline \end{array}$

3. $\begin{array}{r} 38 \\ +47 \\ \hline \end{array}$

4. $\begin{array}{r} 86 \\ +85 \\ \hline \end{array}$

**Addition**

$$\begin{array}{r} {}^{1}260 \\ 521 \\ 78 \\ +\ 310 \\ \hline 1169 \end{array}$$

5. $\begin{array}{r} 583 \\ 97 \\ +626 \\ \hline \end{array}$

6. $\begin{array}{r} \$417.67 \\ +\ 328.56 \\ \hline \end{array}$

8. In one basketball game, a team scored 76 points. In the next game, the same team scored 72 points. How many points did the team score in the two games? ☐

Unified School District No. 1
Racine, Wisconsin

## 3rd Day

**Warm Up:**
"The 10's combinations are important: 6+4, 7+3, etc. If we really know those, then 8+3 is just one more than 8+2. Adding 10 is easy; adding 9 is just one less."

**Review Activities:**

Objective: The pupil will be able to subtract 2 numbers to include renaming.

**Comments:** Special care should be taken to remind pupils of subtractraction problems like #6 which has renaming across two zeros. Extra Practice pages 308, 309 in the back of the book is a good source for oral and board work with some written challenge. Remind pupils how to check subtraction. Use III.

## 4th Day

**Warm Up:**
"Do you have a way to remember 5+7, 5+8, 6+3, 8+6? How about subtraction facts like 12-9? Do the addition facts you really know help you remember the subtraction facts?"

**Review Activities:**

Objective: The pupil will be able to solve a mixed set of addition-subtraction problems.

**Comments:** Discovering More About Numbers on page 336 is a good motivation for mental arithmetic. Most pupils will find it a challenge. Use IV as a culminating activity.

## III. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +10 | | | 17 | | | | | | | | | |
| +9 | | | | | | | | | | 13 | | |

2.
$$\begin{array}{rrr} 7 & 9 & 10 \\ +4 & +2 & -6 \end{array}$$

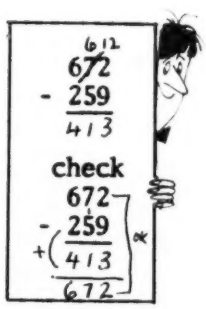
3. $15 - 9 = \square$

4.
$$\begin{array}{r} 758 \\ -425 \end{array}$$

5.
$$\begin{array}{r} 5090 \\ -2766 \end{array}$$

6.
$$\begin{array}{r} 9004 \\ -2589 \end{array}$$

7. $\square + 342 = 900$




8. Ellen took $5.25 on a shopping trip. When she got home, she had $2.93 left. How much money had she spent?

$ ____

Unified School District No. 1
Racine, Wisconsin

## IV. Review Exercises

NAME _____
SCORE _____

1.
$$\begin{array}{rrrrrrrrrr} 5 & 6 & 5 & 6 & 15 & 7 & 15 & 5 & 8 & 12 \\ +7 & +8 & +8 & +3 & -9 & +8 & -7 & +3 & -5 & -9 \end{array}$$

Objective: The pupil will be able to subtract 2 numbers to include renaming.

Comments: Special care should be taken to remind pupils of subtractraction problems like #6 which has renaming across two zeros. Extra Practice pages 308, 309 in the back of the book is a good source for oral and board work with some written challenge. Remind pupils how to check subtraction. Use III.

Objective: The pupil will be able to solve a mixed set of addition-subtraction problems.

Comments: Discovering More About Numbers on page 336 is a good motivation for mental arithmetic. Most pupils will find it a challenge. Use IV as a culminating activity.

## III. Review Exercises

NAME _____

SCORE _____

1.

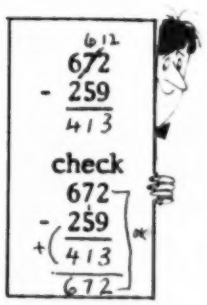
| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +10 | | | 17 | | | | | | | | | |
| +9 | | | | | | | | | | 13 | | |

2. $\begin{array}{r} 7 \\ +4 \end{array}$ $\begin{array}{r} 9 \\ +2 \end{array}$ $\begin{array}{r} 10 \\ -6 \end{array}$

3. $15 - 9 = \square$

4. $\begin{array}{r} 758 \\ -425 \end{array}$

5. $\begin{array}{r} 5090 \\ -2766 \end{array}$




6. $\begin{array}{r} 9004 \\ -2589 \end{array}$

7. $\square + 342 = 900$

8. Ellen took $5.25 on a shopping trip. When she got home, she had $2.93 left. How much money had she spent?

$ ____

Unified School District No. 1
Racine, Wisconsin

## IV. Review Exercises

NAME _____

SCORE _____

1. $\begin{array}{r} 5 \\ +7 \end{array}$ $\begin{array}{r} 6 \\ +8 \end{array}$ $\begin{array}{r} 5 \\ +8 \end{array}$ $\begin{array}{r} 6 \\ +3 \end{array}$ $\begin{array}{r} 15 \\ -9 \end{array}$ $\begin{array}{r} 7 \\ +8 \end{array}$ $\begin{array}{r} 15 \\ -7 \end{array}$ $\begin{array}{r} 5 \\ +3 \end{array}$ $\begin{array}{r} 8 \\ -5 \end{array}$ $\begin{array}{r} 12 \\ -9 \end{array}$

2. $\begin{array}{r} 534 \\ +382 \end{array}$

3. $\begin{array}{r} 675 \\ +847 \end{array}$

4. $\begin{array}{r} 637 \\ -391 \end{array}$

5. $\begin{array}{r} 5432 \\ -4374 \end{array}$

6. $\begin{array}{r} 427 \\ 839 \\ +634 \end{array}$

7. Edenton has a population of 3,465. Gloversville has a population of 2,678. What is the total population of the two towns?

_____

8. Mr. Brown had $758 left in his savings account after he bought a sailboat for $1,229. How much money did he have in his savings account before he bought the boat?

$ _____

Unified School District No. 1
Racine, Wisconsin

## 5th Day

**Warm Up:**

"Which facts are giving us trouble? Should we use only those facts that need work? How about Subtraction Facts?"

**Review Activities:**

Objective: The pupil will be able to add and subtract like fractions and reduce to lowest terms.

Comments: Encourage the pupils to draw diagrams when solving fraction problems like #7. You may wish to review reducing to lowest terms to remind them of the process. Use V.

## 6th Day

**Warm Up:**

"How good are you at remembering multiplication facts? In the next few days we will work on the mulitplication facts so that all of you will become more proficient. Multiplying by 2 are our doubles; by 4 are double the doubles; by 5 is counting by 5."

**Review Activities:**

Objective: The pupil will be able to multiply 2d x 1d.

Comments: Remind the pupils of multiplying by 1 and 0. The review is intended to remind pupils of the multiplication algorithm. In Learning Stage 2 you will have another opportunity to explore why the algorithm "works." Page 311 could be explored. Use VI.

## V. Review Exercises

NAME _____
SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12 | 12 | 17 | 11 | 14 | 13 | 9 | 8 | 6 | 4 |
| - 7 | - 3 | - 8 | - 6 | - 9 | - 8 | +7 | +3 | +4 | +9 |

Reduce to lowest terms:

2. $\frac{7}{10}$ + $\frac{1}{10}$

3. $\frac{7}{8}$ - $\frac{3}{8}$

4. $1\frac{3}{10}$ - $\frac{9}{10}$

5. $\frac{11}{12}$ - $\frac{5}{12}$

6. Mr. Nelson had a load of $1\frac{1}{5}$ tons of cement blocks and $\frac{3}{5}$ ton of crushed rocks in his truck. What was the weight of the entire load?

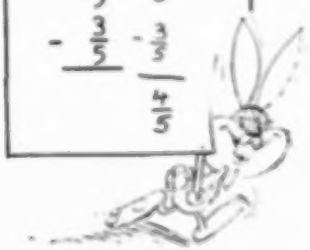
7. Mrs. Hanson had $1\frac{1}{4}$ yards of linen. She used $\frac{3}{4}$ yard to make a hand towel. How much linen did she have left?

**Lowest Terms**

$\frac{6 \div 2}{10 \div 2} = \frac{3}{5}$

$1\frac{2}{5} = \frac{7}{5}$

$\frac{7}{5} - \frac{3}{5} = \frac{4}{5}$



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Racine, Wisconsin

## VI. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x2 | | | 14 | | | | | | | | | |

**Multiplication**

Objective: The pupil will be able to add and subtract like fractions and reduce to lowest terms.

Comments: Encourage the pupils to draw diagrams when solving fraction problems like #7. You may wish to review reducing to lowest terms to remind them of the process. Use V.

Objective: The pupil will be able to multiply 2d x 1d.

Comments: Remind the pupils of multiplying by 1 and 0. The review is intended to remind pupils of the multiplication algorithm. In Learning Stage 2 you will have another opportunity to explore why the algorithm "works." Page 311 could be explored. Use VI.

## V. Review Exercises

NAME _____
SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12 | 12 | 17 | 11 | 14 | 13 | 9 | 8 | 6 | 4 |
| -7 | -3 | -8 | -6 | -9 | -8 | +7 | +3 | +4 | +9 |

Reduce to lowest terms:

2. $\frac{7}{10} + \frac{1}{10}$

3. $\frac{7}{8} - \frac{3}{8}$

4. $1\frac{3}{10} - \frac{9}{10}$

5. $\frac{11}{12} - \frac{5}{12}$

6. Mr. Nelson had a load of $1\frac{1}{5}$ tons of cement blocks and $\frac{3}{5}$ ton of crushed rocks in his truck. What was the weight of the entire load?

7. Mrs. Hanson had $1\frac{1}{4}$ yards of linen. She used $\frac{3}{4}$ yard to make a hand towel. How much linen did she have left?

**Lowest Terms**

$\frac{6 \div 2}{10 \div 2} = \frac{3}{5}$

$\frac{5}{5} \rightarrow 1\frac{2}{5} = \frac{7}{5}$

$\frac{7}{5} - \frac{3}{5} = \frac{4}{5}$

Unified School District No. 1
Racine, Wisconsin

## VI. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x2 | | | 14 | | | | | | | | | |
| x4 | | | | | | | 32 | | | | | |
| x5 | | 25 | | | | | | | | | | |

2. 4 x 56 = ☐

3. 4 x 72 = ☐

4. $\begin{array}{r} 76 \\ \times\ 5 \\ \hline \end{array}$

5. $\begin{array}{r} 36 \\ \times\ 4 \\ \hline \end{array}$

6. $\begin{array}{r} 921 \\ \times\ 2 \\ \hline \end{array}$

**Multiplication**

4 x 65 = 4×60 + 4×5
= 240 + 20
= 260

$\begin{array}{r} 67 \\ \times\ 5 \\ \hline \end{array}$ $\begin{cases} 5 \times 60 + 5 \times 7 \\ 300 + 35 \\ 335 \end{cases}$

$\begin{array}{r} 67 \\ \times\ 5 \\ \hline 35 \\ 300 \\ \hline 335 \end{array}$ $\begin{array}{r} {\scriptstyle 3}\,{\scriptstyle 1} \\ 67 \\ \times\ 5 \\ \hline 335 \end{array}$

7. Marge bought 4 packets of stamps, with 80 stamps in each packet. How many stamps did she receive? ☐

Unified School District No. 1
Racine, Wisconsin

## 7th Day

**Warm Up:**

"Let's get good at multiplying by 3 and by 9. Do you see patterns that will help you remember? [3x7 = (2x7) + 7; 4x9 = 36, sum of digits in product is always 9; 10's digit is one less than number multiplied by 9]

**Review Activities:**

Objective: The pupil will be able to multiply 2d x 1d; 3d x 1d

**Comments:** Row 4 of the drill grid means 4 times 1st Row, then add 3: 4 x ☐ + 3. Page 312 of the Extra Practice section could be used for oral review and board work. Remember the possible use of the District's Basic Facts sheets for time-testing. Use VII.

## 8th Day

**Warm Up:**

"Let's use all of the multiplication facts that we have reviewed already in our warm up activities and investigate x3, x6."

**Review Activities:**

Objective: The pupil will be able to multiply 2d x 2d.

**Comments:** Page 338 could serve as a source for enrichment to challenge those who already have mastered 2d x 2d. Use VIII.

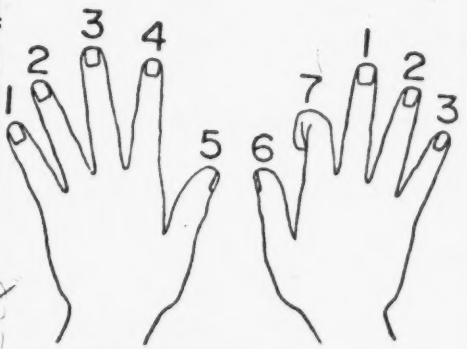
## VII. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| x3 | | 15 | | | | | | | | | |
| x9 | | | | 54 | | | | | | | |
| x4; +3 | | | | | | | 11 | | | | |




2. 32 x 3

3. 67 x 9

4. 49 x 4

Did you know that you could use your fingers to multiply by 9? 7x9 -- Bend the 7th finger; 6 to the left are 6 tens or 60, 3 to the right are 3 ones or 3, thus 7x9 = 63. Try other products. Does it work?

5. 79 x 9

6. 427 x 3

7. 837 x 3

| | |
|---|---|
| 65 x 9 = 585 | 576 x 4 = 2304 |

Unified School District No. 1
Racine, Wisconsin

## VIII. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x3 | | | | | | | 6 | | | | | |

32 x 21

Comments: Row 4 of the drill grid means 4 times 1st Row, then add 3: 4 x ☐ + 3. Page 312 of the Extra Practice section could be used for oral review and board work. Remember the possible use of the District's Basic Facts sheets for time-testing. Use VII.

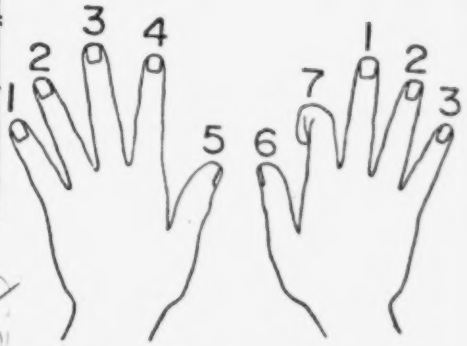
Comments: Page 338 could serve as a source for enrichment to challenge those who already have mastered 2d x 2d. Use VIII.

## VII. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| x3 | | 15 | | | | | | | | | |
| x 9 | | | | 54 | | | | | | | |
| x4; +3 | | | | | | | 11 | | | | |




2. 32 x 3

3. 67 x 9

4. 49 x 4

Did you know that you could use your fingers to multiply by 9? 7x9 -- Bend the 7th finger; 6 to the left are 6 tens or 60, 3 to the right are 3 ones or 3, thus 7x9 = 63. Try other products. Does it work?

65 x 9 = 585

576 x 4 = 2304

5. 79 x 9

6. 427 x 3

7. 837 x 3

Unified School District No. 1
Racine, Wisconsin

## VIII. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X 3 | | | | | | | 6 | | | | | |
| x 6 | | | | | | | | | | | | 600 |
| x 5; +4 | | 29 | | | | | | | | | | |

32 x 21 = 672

74 x 63 = 4662

2. 24 x 6

3. 24 x 30

4. 24 x 36

5. 58 x 93

6. What is the greatest whole number that will make the sentence true?

☐ x 9 < 65

7. There were 21 cabins in camp, with 19 boys in each cabin. How many boys were there in camp? ☐

Unified School District No. 1
Racine, Wisconsin

## 9th Day

Warm Up:
"Is there a relationship between multiplying by 4 and by 8?

Review Activities:

Objective: The pupil will be able to multiply up to 2d x 2d.

Comments: Problems 5 and 6 are types of problems that could be used in oral reviews and Warm Ups. This type of problem is excellent readiness for division. No. 7 uses the array model for multiplication. This could give you an opportunity to review this model for a deeper understanding of multiplication. Use IX.

## 10th Day

Warm Up:
"How about multiplying by 7? 'Knowing' the multiplication facts aids in remembering the division facts."

Review Activities:

Objectives: The pupil will be able to
1) Divide 3d ÷ 1d without remainders by the "ladder" method.
2) Find the average of a set of numbers.

Comments: The fourth grade curriculum uses the ladder method only for division. You might remind your pupils how to check division. The idea of average should be discussed as a process -- add and divide. The statistical implications of average is a nice enrichment topic. Use X.

## IX. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x4 | 12 | | | | | | | | | | | |
| x8 | | | | 48 | | | | | | | | |
| x 3; +2 | | | | | | | | 8 | | | | |

92
x 38
736
276
3496

2. 604
x 5

3. 24
x 31

4. 97
x 35

5. 4 x 3 = ☐
4 x 30 = ☐
4 x 300 = ☐

6. 8 x 6 = ☐
8 x 60 = ☐
8 x 600 = ☐

7. Mr. Brown owns a tree farm. He planted 32 rows of trees, with 35 trees in each row. How many trees did he plant?

☐

Unified School District No. 1
Racine, Wisconsin

## X. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x7 | | | | | | 7 | | | | | | |

2. 42 ÷ 6 = ____
36 ÷ 4 = ____

Comments: Problems 5 and 6 are types of problems that could be used in oral reviews and Warm Ups. This type of problem is excellent readiness for division. No. 7 uses the array model for multiplication. This could give you an opportunity to review this model for a deeper understanding of multiplication. Use IX.

2) Find the average of a set of numbers.

Comments: The fourth grade curriculum uses the ladder method only for division. You might remind your pupils how to check division. The idea of average should be discussed as a process -- add and divide. The statistical implications of average is a nice enrichment topic. Use X.

## IX. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x4 | 12 | | | | | | | | | | | |
| x8 | | | | 48 | | | | | | | | |
| x 3; +2 | | | | | | | | 8 | | | | |

92
x 38
736
2760
3496

2. 604
x 5

3. 24
x 31

4. 97
x 35

5. 4 x 3 = ☐
4 x 30 = ☐
4 x 300 = ☐

6. 8 x 6 = ☐
8 x 60 = ☐
8 x 600 = ☐

7. Mr. Brown owns a tree farm. He planted 32 rows of trees, with 35 trees in each row. How many trees did he plant?

☐

Oxford School District No. 1
Racine, Wisconsin

## X. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x7 | | | | | | 7 | | | | | | |
| x9 | | | | | | | | 18 | | | | |
| +9 | | | | | | | | | | | | 109 |

2. 42 ÷ 6 = ____
36 ÷ 4 = ____
56 ÷ 8 = ____
28 ÷ 4 = ____
30 ÷ 5 = ____
81 ÷ 9 = ____

3. 4)84

4. 8)488

5. 6)336

72
9)648
-180 20
468
-450 50
18
-18 2
0 72

72
9)648
-630 70
18
-18 2
0 72

6. $\frac{1}{3}$ of 18 = ☐

7. Jane kept a record of scores she made on 4 spelling tests. Her scores were 17, 13, 18, and 20. What was her average score?

☐

Oxford School District No. 1
Racine, Wisconsin

## 11th Day

**Warm Up:**
"In our Warm Up activities, I'm going to choose basic facts from addition, subtraction, multiplication or division."

**Review Activity:**

Objective: The pupil will be able to divide up to 3d ÷ 1d with remainder.

**Comments:** The most effective readiness for division is the ability to multiply mentally. Problems like #1 and #6 are good examples of types of problems that pupils could be challenged to do mentally. Use XI.

## 12th Day

**Warm Up:**
"We will continue to keep skillful with basic facts."

**Review Activity:**

Objective: The pupil will be able to divide up to 3d ÷ 2d with remainder.

**Comments:** Division is extended to the 2-digit divisor. Extra Practice pages 311-316 is a good source for oral, small group, and board work.

## XI. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x 30 | | | | | | | | 240 | | | | |
| x 40 | | | | 240 | | | | | | | | |
| x 9; +3 | | 48 | | | | | | | | | | |

64 R3 — 64 × 8 = 512 + 3 = 515

2. 5)37

3. 4)74

4. 8)491

5. 7)319

6. 5 x 41 = ☐
8 x 51 = ☐
2 x 84 = ☐

7. Mike used 72 pieces of candy to fill 8 bags. He put the same number of pieces into each bag. How many pieces were in each bag? ☐

Unified School District No. 1
Racine, Wisconsin

## XII. Review Exercises

NAME _____
SCORE _____

1. 8 + 7 = ____ 14 - 6 = ____ 9 x 6 = ____ 7)49 7 x 8 = ____ 6 x 7 = ____ 15 - 6 = ____ 17 - 9 = ____ 4)36 300 + 800 = ____

**Comments:** The most effective readiness for division is the ability to multiply mentally. Problems like #1 and #6 are good examples of types of problems that pupils could be challenged to do mentally. Use XI.

**Comments:** Division is extended to the 2-digit divisor. Extra Practice pages 311-316 is a good source for oral, small group, and board work.

## XI. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x30 | | | | | | | | 240 | | | | |
| x40 | | | | 240 | | | | | | | | |
| x9; +3 | | 48 | | | | | | | | | | |

64R3 — 8)515 — 480 — 35 — 32 — 3

64 × 8 = 512 + 3 = 515

2. 5)37

3. 4)74

4. 8)491

5. 7)319

6. 5 x 41 = ☐

8 x 51 = ☐

2 x 84 = ☐

7. Mike used 72 pieces of candy to fill 8 bags. He put the same number of pieces into each bag. How many pieces were in each bag? ☐

Unified School District No. 1
Racine, Wisconsin

## XII. Review Exercises

NAME _____

SCORE _____

1.

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 8 + 7 | 14 - 6 | 9 x 6 | 7)49 | 7 x 8 | 6 x 7 | 15 - 6 | 17 - 9 | 4)36 | 300 + 800 |

2. 40)320

3. 60)477

4. 51)408

5. 42)174

6. 71)290

6R10 — 84)514 — 504 — 10

84 × 6 = 504 + 10 = 514

Unified School District No. 1
Racine, Wisconsin

## 13th Day

Warm Up:
"Which facts should we use in our activities today?"

Review Activity:

Objective: Mixed Problems

Comments: Discovering More About Numbers pages 338, 339 are good exploratory topics that could be used for oral work or small group activities. Use XIII.

## 14th Day

Warm Up:
"How about just subtraction facts today?"

Review Activity:

Objective: Mixed Problems

Comments: Maintaining skills in computation must be a constant objective of the mathematics program. Pupils should be challenged to get "good" in computation. Higher level objectives and interesting topics can be explored if a pupil is not handicapped by lack of skills. Use XIV.

## XIII. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X6 | | | | | 0 | | | | | | | |
| X8 | | | | | | | | | 80 | | | |
| +7 | | | | | | | 9 | | | | | |

2. Round off 527 to the nearest ten. ☐

3. ☐ x 15 = 150

4. Which digit is in the ten thousands place in 754,308? ☐

5. $5.20 × 9

6. 603 × 8

$ ☐

7. $\frac{1}{8}$ of 56 is ☐

8. John belonged to a club that had 9 members. The boys decided to buy a flag for their clubhouse. Each member was to pay his share of the cost of the flag. The flag cost $5.49. What was each member's share?

Unified School District No. 1
Racine, Wisconsin

## XIV. Review Exercises

NAME _____
SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 14 | 11 | 12 | 14 | 13 | 17 | 18 | 16 |
| -3 | -5 | -5 | -6 | -4 | -9 | -8 | -8 | -9 | -7 |

Comments: Discovering More About Numbers pages 338, 339 are good exploratory topics that could be used for oral work or small group activities. Use XIII.

Comments: Maintaining skills in computation must be a constant objective of the mathematics program. Pupils should be challenged to get "good" in computation. Higher level objectives and interesting topics can be explored if a pupil is not handicapped by lack of skills. Use XIV.

## XIII. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x6 | | | | | 0 | | | | | | | |
| x8 | | | | | | | | | 80 | | | |
| +7 | | | | | | | 9 | | | | | |

2. Round off 527 to the nearest ten. ☐

3. ☐ x 15 = 150

4. Which digit is in the ten thousands place in 754,308? ☐

5. $5.20 x 9

6. 603 x 8

$ ☐

7. $\frac{1}{8}$ of 56 is ☐

8. John belonged to a club that had 9 members. The boys decided to buy a flag for their clubhouse. Each member was to pay his share of the cost of the flag. The flag cost $5.49. What was each member's share?

Unified School District No. 1
Racine, Wisconsin

## XIV. Review Exercises

NAME _____
SCORE _____

1. 11 - 3 ; 12 - 5 ; 14 - 5 ; 11 - 6 ; 12 - 4 ; 14 - 9 ; 13 - 8 ; 17 - 8 ; 18 - 9 ; 16 - 7

2. $8\overline{)328}$

3. $2 = \frac{\square}{2}$

4. $6\overline{)26}$

5. 907 x 7

6. $91\overline{)752}$

7. $\frac{1}{8} + \frac{1}{8} = \square$

8. 92232 - 45798

9. 97 x 84

Unified School District No. 1
Racine, Wisconsin

Division of Instructional Services
Unified School District No. 1 of Racine County
Racine, Wisconsin

Department of Mathematics

6th Grade Review

To: All Sixth Grade Teachers
Elementary School Principals

From: John D. Aceto, Consultant in Mathematics

Subject: Review Program for Mathematical Skills

We recognize that our pupils need a reminder of the Arithmetic skills learned in the previous year and practice to maintain those skills that were developed. The contents of this package has the primary objective of suggesting a planned sequential review of the skills that should have been achieved by your pupils last year.

This material should be used during school weeks 2, 3, and 4. One review exercise should be given each day during this time. Either copy the exercises on the chalkboard or supply ditto sheets from a thermofax master made from the contents of this package. Have the pupils correct their solutions during class, discussing exercises causing trouble. Continue with your usual mathematics lessons, but use these reviews as a guide assigning extra practice.

During the fifth week you will be asked to give a test which will be in the standardized test format and will be machine scored. The results will be analyzed on a district-wide basis with feedback for your class and each child giving us diagnostic capabilities to better provide for individual needs of our pupils.

If I can render any assistance, please do not hesitate to call.

## Answers Review Exercises

6th Grade

I. 1. 4, 6, 8, 7, 1, 2, 3, 9, 11, 5, 10, 101
6, 8, 10, 9, 3, 4, 5, 11, 13, 7, 12, 103
5, 7, 9, 8, 2, 3, 4, 10, 12, 6, 11, 102
2. 4, 43 3. 8, 84 4. 3, 13
5. 50, 150 6. 40, 11 7. 0, 10

II. 1. 10, 8, 11, 18, 16, 14, 15, 12, 7, 11
2. 59 3. 143 4. 1239
5. 30 6. 1107 7. 1084
8. 8173 9. 31 10. $4.46

III. 1. 13, 15, 17, 16, 10, 11, 12, 18, 20, 14, 19, 110
12, 14, 16, 15, 9, 10, 11, 17, 19, 13, 18, 109
2. 11, 11, 4
3. 24 4. 39 5. 423
6. 268 7. 8476 8. 317 9. 124 10. $51.95

IV. 1. 12, 14, 13, 9, 6, 13, 8, 8, 3, 3
2. 174 3. 367 4. 4548
5. 4016 6. 284 7. 3430 8. 2629

V. 1. 5, 9, 9, 5, 5, 5, 16, 11, 10, 13
2. $\frac{7}{9}$ 3. $\frac{4}{8}$ or $\frac{1}{2}$ 4. $\frac{12}{10}$ or $1\frac{1}{5}$
5. $12\frac{1}{3}$ 6. $2\frac{1}{6}$ 7. $3\frac{11}{24}$ 8. $1\frac{7}{8}$

VI. 1. 6, 10, 14, 12, 0, 2, 4, 16, 20, 8, 18, 200
12, 20, 28, 24, 0, 4, 8, 32, 40, 16, 36, 400
15, 25, 35, 30, 0, 5, 10, 40, 50, 20, 45, 500
2. 272 3. 1356 4. 3525
5. 3920 6. 1228
7. 48 8. 1435

VII. 1. 9, 15, 21, 18, 0, 3, 6, 24, 30, 12, 27
27, 45, 63, 54, 0, 9, 18, 72, 90, 36, 81
15, 23, 31, 27, 3, 7, 11, 35, 43, 19, 39
2. 2074 3. 7905 4. 5166
5. 26197 6. 14732 7. $132.00

VIII. 1. 9, 15, 21, 18, 0, 3, 24, 6, 30, 12, 27, 300
18, 30, 42, 36, 0, 6, 48, 12, 60, 24, 54, 600
19, 29, 39, 34, 4, 9, 44, 14, 54, 24, 49, 504
2. 1152 3. 14701
4. 30508 5. 252450

IX. 1. 12, 20, 28, 24, 0, 4, 8, 32, 40, 16, 36, 400
24, 40, 56, 48, 0, 8, 16, 64, 80 32, 72, 800
14, 20, 26, 23, 5, 8, 14, 29, 35, 17, 32, 305
2. 58 3. 622 4. 504
5. 11 6. $1.24 7. 2367
8. 527

X. 1. 21, 35, 49, 42, 0, 7, 14, 56, 70, 28, 63, 700
150, 250, 350, 300, 0, 50, 100, 400, 500, 200, 450, 5000
210, 350, 490, 420, 0, 70, 140, 560, 700, 280, 630, 7000
2. 7, 9, 7, 7, 6, 9
3. 78 R 34
4. 39 R 67 5. 53 R 77 6. 85

XI. 1. 90, 150, 210, 180, 0, 30, 240, 60, 300 120, 270, 3000
120, 200, 280, 240, 0, 40, 320, 80, 400, 160, 360, 4000
30, 48, 66, 57, 3, 12, 75, 21, 93, 39, 84, 903
2. 22.8 3. 1.834 4. 14.98 5. $84.24 6. 34.11
7. 17.163 8. $.39

XII. 1. 15, 8, 54, 7, 56, 42, 9, 8, 9, 1100
2. $\frac{4}{9}$ 3. $\frac{5}{3}$ or $1\frac{2}{5}$
4. $\frac{12}{8}$ or $1\frac{4}{8}$ or $1\frac{1}{2}$ 5. 6 6. 18 7. 15

8. 8173 9. 31 10. $4.46

---

III. 1. 13, 15, 17, 16, 10, 11, 12, 18, 20, 14, 19, 110
12, 14, 16, 15, 9, 10, 11, 17, 19, 13, 18, 109
2. 11, 11, 4
3. 24 4. 39 5. 423
6. 268 7. 8476 8. 317 9. 124 10. $51.95

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IV. 1. 12, 14, 13, 9, 6, 13, 8, 8, 3, 3
2. 174 3. 367 4. 4548
5. 4016 6. 284 7. 3430 8. 2629

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V. 1. 5, 9, 9, 5, 5, 5, 16, 11, 10, 13
2. $\frac{7}{9}$ 3. $\frac{4}{8}$ or $\frac{1}{2}$ 4. $\frac{12}{10}$ or $1\frac{1}{5}$
5. $12\frac{1}{3}$ 6. $2\frac{1}{6}$ 7. $3\frac{11}{24}$ 8. $1\frac{7}{8}$

---

VI. 1. 6, 10, 14, 12, 0, 2, 4, 16, 20, 8, 18, 200
12, 20, 28, 24, 0, 4, 8, 32, 40, 16, 36, 400
15, 25, 35, 30, 0, 5, 10, 40, 50, 20, 45, 500
2. 272 3. 1356 4. 3525
5. 3920 6. 1228
7. 48 8. 1435

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VII. 1. 9, 15, 21, 18, 0, 3, 6, 24, 30, 12, 27
27, 45, 63, 54, 0, 9, 18, 72, 90, 36, 81
15, 23, 31, 27, 3, 7, 11, 35, 43, 19, 39
2. 2074 3. 7905 4. 5166
5. 26197 6. 14732 7. $132.00

---

VIII. 1. 9, 15, 21, 18, 0, 3, 24, 6, 30, 12, 27, 300
18, 30, 42, 36, 0, 6, 48, 12, 60, 24, 54, 600
19, 29, 39, 34, 4, 9, 44, 14, 54, 24, 49, 504
2. 1152 3. 14701
4. 30508 5. 252450

---

IX. 1. 12, 20, 28, 24, 0, 4, 8, 32, 40, 16, 36, 400
24, 40, 56, 48, 0, 8, 16, 64, 80 32, 72, 800
14, 20, 26, 23, 5, 8, 14, 29, 35, 17, 32, 305
2. 58 3. 622 4. 504
5. 11 6. $1.24 7. 2367
8. 527

---

X. 1. 21, 35, 49, 42, 0, 7, 14, 56, 70, 28, 63, 700
150, 250, 350, 300, 0, 50, 100, 400, 500, 200, 450, 5000
210, 350, 490, 420, 0, 70, 140, 560, 700, 280, 630, 7000
2. 7, 9, 7, 7, 6, 9
3. 78 R 34
4. 39 R 67 5. 53 R 77 6. 85

---

XI. 1. 90, 150, 210, 180, 0, 30, 240, 60, 300 120, 270, 3000
120, 200, 280, 240, 0, 40, 320, 80, 400, 160, 360, 4000
30, 48, 66, 57, 3, 12, 75, 21, 93, 39, 84, 903
2. 22.8 3. 1.834 4. 14.98 5. $84.24 6. 34.11
7. 17.163 8. $.39

---

XII. 1. 15, 8, 54, 7, 56, 42, 9, 8, 9, 1100
2. $\frac{4}{9}$ 3. $\frac{5}{3}$ or $1\frac{2}{5}$
4. $\frac{12}{8}$ or $1\frac{4}{8}$ or $1\frac{1}{2}$ 5. 6 6. 18 7. 15

---

XIII. 1. 18, 30, 42, 36, 0, 6, 12, 48, 60, 24, 54, 600
24, 40, 56, 48, 0, 8, 16, 64, 80, 32, 72, 800
10, 12, 14, 13, 7, 8, 9, 15, 17, 11, 16, 107
2. 15735
3. 59185
4. 75
5. 1349 6. $8\frac{2}{5}$ 7. 360000 8. 18

---

XIV. 1. 8, 7, 9, 5, 8, 5, 5, 9, 9, 9
2. 17 3. 7 4. 41
5. 12 6. 24 7. 9 8. 8x6 9. 3 10. 0 11. 8

| Level 4 | Level 5 |
|---|---|
| Time testing Basic Facts<br>3d + 3d<br>3d column<br>"like" fractions<br>Mixed Numbers | Time testing Basic Facts<br>4d column<br>All fractions<br>All decimals |
| Time testing Basic Facts<br>4d - 3d<br>"like" fractions<br>Mixed Numbers | Time testing Basic Facts<br>5d - 4d<br>All fractions<br>All decimals |
| Time testing Basic Facts<br>5 sec 4 sec 3 sec<br>Basic facts to 81<br>Multiplies by 10's (5 x 30)<br>Multiplies by 100's<br>2 & 3d x 1d<br>2d x 2d<br>Estimate Products:<br>21 x 88 ≈ 20 x 90 = 1800 | Time testing Basic Facts<br>3d x 3d<br>Fractions<br>Mixed Numbers |
| Time testing Basic Facts<br>5 sec 4 sec 3 sec<br>1d⟌2d 1d⟌3d<br>2d⟌3d 2d⟌4d<br>2d⟌3d with R 2d⟌4d with R<br>Estimate quotients<br>795 ÷ 23 ≈ 800 ÷ 20 = 40 | Time testing Basic Facts<br>2d⟌5d with R<br>Division by Algorithm<br>Quotients as mixed numerals<br>$24 \div 5 = 4\frac{4}{5}$ |
| Reads numbers<br>to 1000<br>to 1000000 | Writes numbers in powers of 10.<br>Reads and charts decimal numbers. |
| Equivalent fractions<br>$\frac{1}{4} = \frac{\square}{8}$<br>Reduce to lowest terms | Equivalent fractions in lowest terms<br>Converts fractions to decimals |
| Applies associative principle to +, x<br>Uses distributive principle for multiplication<br>3 x (70 + 4) = 3 x 70 + 3 x 4 = 210 + 12 = 222<br>Perform basic money values operations with ($.33 x 4)<br>Two step addition and subtraction problems<br>One step multiplication problems<br>One step division problems<br>Two step problems mixed operations | |

The chart at the left represents the exposure of the Computation component of our District's mathematics program for grades 4 and 5

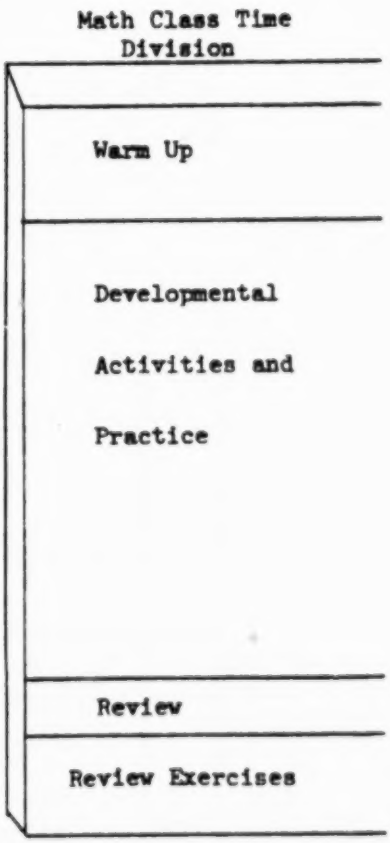
Last year's fine test scores at the 6th grade level are a testimony to the outstanding job being done at 5th and 6th grade level. It does take consistent effort and inspired teaching: you are to be commended.

## Time Division

Many teachers have found the time division at the right to be very effective.

Warm Up is intended to stimulate pupils and maintain skills in Basic Facts. A two to five minute activity at the beginning of each math period is usually quite effective. These activities can take the form of contests, flash card drills, mental arithmetic and other game type activities.

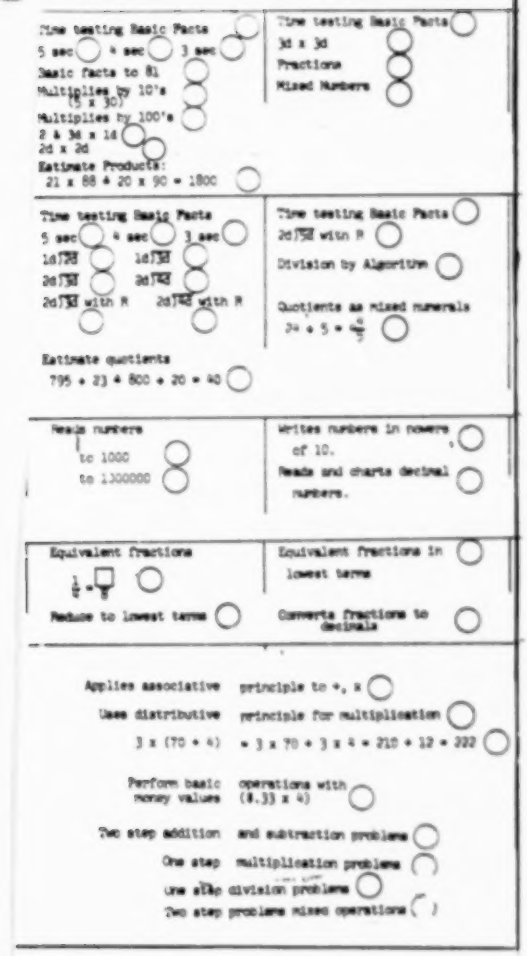
Developmental Activities is the heart of the mathematics lesson when pupils are involved in learning, discovering and exploring mathematics; practicing and refining understanding.




Review serves as instructional closure; maintaining computational skills, maintaining problem solving skills, remediating, and enriching.

The written review activity could be used at any appropriate time during the math period, but should probably be used after some developmental oral and/or written activity that reviews the concepts and skills that are represented in the activity. The review activities could give you some feedback as to how well your pupils understand the material presented and what needs they have for reteaching and reinforcement at this time or when it comes up during the year again.

After a general explanation of what is involved in the written review activity, pairs of pupils, small groups as well as individual pupils, could complete the activity. Pupil presentations of correct solutions on the chalkboard after completion is also


Time testing Basic Facts
5 sec
4 sec
3 sec
Basic facts to 81
Multiplies by 10's (5 x 30)
Multiplies by 100's
2 & 3d x 1d
2d x 2d
Estimate Products: 21 x 88 ≈ 20 x 90 = 1800
Time testing Basic Facts
3d x 3d
Fractions
Mixed Numbers
Time testing Basic Facts
5 sec
4 sec
3 sec
1d/2d
1d/3d
2d/2d
2d/3d
2d/3d with R
2d/4d with R
Time testing Basic Facts
2d/2d with R
Division by Algorithm
Quotients as mixed numerals
24 ÷ 5 = 4 4/5
Estimate quotients
795 ÷ 23 ≈ 800 ÷ 20 = 40
Reads numbers
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to 1000000
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Equivalent fractions
1/2 = □/8
Reduce to lowest terms
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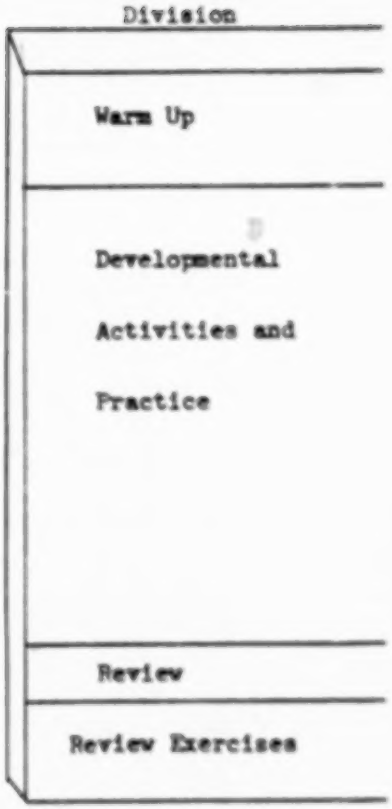


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After a general explanation of what is involved in the written review activity, pairs of pupils, small groups as well as individual pupils, could complete the activity. Pupil presentations of correct solutions on the chalkboard after completion is also effective. These reviews are to remind and maintain skills and not tests.

---

| + | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 1 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| 2 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 3 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 4 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 5 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 6 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| 7 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 8 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| 9 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |

## Basic Facts

To analyze facts needing practice, pupils could check (✓) those they know on an addition and multiplication table. They could also make their own set of flash cards as they 'really' learn each fact.

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| 2 | 0 | 2 | 4 | 6 | 8 | 10 | 12 | 14 | 16 | 18 |
| 3 | 0 | 3 | 6 | 9 | 12 | 15 | 18 | 21 | 24 | 27 |
| 4 | 0 | 4 | 8 | 12 | 16 | 20 | 24 | 28 | 32 | 36 |
| 5 | 0 | 5 | 10 | 15 | 20 | 25 | 30 | 35 | 40 | 45 |
| 6 | 0 | 6 | 12 | 18 | 24 | 30 | 36 | 42 | 48 | 54 |
| 7 | 0 | 7 | 14 | 21 | 28 | 35 | 42 | 49 | 56 | 63 |
| 8 | 0 | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 |
| 9 | 0 | 9 | 18 | 27 | 36 | 45 | 54 | 63 | 72 | 81 |

## A Drill and Practice Format

This is a format that could be used as drill and practice for basic facts. The directions to be issued would be to add, or multiply, row one by the specified number.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +3 | 6 | 8 | 10 | 9 | 3 | 4 | 5 | 11 | 13 | 7 | 12 | 103 |
| +9 | 12 | 14 | 16 | 15 | 9 | 10 | 11 | 17 | 19 | 13 | 18 | 109 |
| X2 | 6 | 10 | 14 | 12 | 0 | 2 | 4 | 16 | 20 | 8 | 18 | 200 |

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | |

## 1st Day

**Warm Up:**

"Within the next few days we will review the Basic Facts at the beginning of each Math period. Let's see how well you know how to add 0, 1, 2, 3 and subtract 1?"

Note: Use +1, +2, +3, -1 facts in Warm Up Activities.

**Review Activities:**

Objective: The pupil will be able to rename numbers to tens and ones place.

Comments: Problem 1 of each Review Exercise, below, will contain Basic Facts that you will have used in your Warm Up. Urge pupils to complete those quickly to develop speed and accuracy. Problems 2-7 are place value readiness for the addition subtraction algorithm. Use Review Exercises I as a culminating activity.

## 2nd Day

**Warm Up:**

"Today we will not only use those easy facts in our warm up, but we will use the doubles and one more than the doubles. I know you know 5+5, then 5+6 is just one more. 7+7, 7+8, etc."

**Review Activities:**

Objective: The pupil will be able to add with and without renaming.

Comments: Regrouping in addition is fundamental by this level. Pupils should be working toward speed and accuracy. "Word problems will appear regularly in the Review reminding you that Problem Solving must be emphasized continually. The completed problem in the "box" will give the pupil a model of a solution of a problem.

cut-to make thermofax master

NAME _____
SCORE _____

## I. Review Exercises

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +1 | | | 8 | | | | | | | | | |
| +3 | | | | | | | 5 | | | | | |
| +2 | | | | | | | | | | | | 102 |

**Renaming Numbers**

$$\begin{array}{r} {}^{2}\not{4}{}^{11}\not{3}1 \\ -\ 126 \\ \hline \end{array}$$

$$\begin{array}{r} {}^{1} \\ 67 \\ +\ 23 \\ \hline 0 \end{array}$$

2. 3 tens + 13 ones = ☐ tens + 3 ones or ☐

3. 7 tens + 14 ones = ☐ tens + 4 ones or ☐

4. [43] 4 tens, ☐ ones or $\overset{1}{3}$ tens, ☐ ones

5. [357] 300 + ☐ + 7 or 200 + ☐ + 7

6. [241] 200 + ☐ + 1 or 200 + 30 + ☐

7. [903] 900 + ☐ + 3 or 800 + ☐ + 3

Unified School District No. 1
Racine, Wisconsin

## II. Review Exercises

NAME _____
SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 6 | 9 | 8 | 7 | 7 | 6 | 4 | 7 |
| +5 | +4 | +5 | +9 | +8 | +7 | +8 | +6 | +3 | +6 |

2. 24 + 35 = ☐ 3. 87 4. 624 5. 6

Objective: The pupil will be able to rename numbers to tens and ones place.

Comments: Problem 1 of each Review Exercise, below, will contain Basic Facts that you will have used in your Warm Up. Urge pupils to complete those quickly to develop speed and accuracy. Problems 2-7 are place value readiness for the addition subtraction algorithm. Use Review Exercises I as a culminating activity.

with and without renaming.

Comments: Regrouping in addition is fundamental by this level. Pupils should be working toward speed and accuracy. "Word problems will appear regularly in the Review reminding you that Problem Solving must be emphasized continually. The completed problem in the "box" will give the pupil a model of a solution of a problem.

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## I. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +1 | | | 8 | | | | | | | | | |
| +3 | | | | | | | 5 | | | | | |
| +2 | | | | | | | | | | | | 102 |

Renaming Numbers

$$\begin{array}{r} {}^{2}\cancel{4}{}^{11}\cancel{3}1 \\ -\ 126 \\ \hline \end{array}$$

$$\begin{array}{r} {}^{1}\ \ \\ 67 \\ +\ 23 \\ \hline 0 \end{array}$$

2. 3 tens + 13 ones = ☐ tens + 3 ones or ☐

3. 7 tens + 14 ones = ☐ tens + 4 ones or ☐

4. [43] 4 tens, ☐ ones or 3 tens, ☐ ones

5. [357] 300 + ☐ + 7 or 200 + ☐ + 7

6. [241] 200 + ☐ + 1 or 200 + 30 + ☐

7. [903] 900 + ☐ + 3 or 800 + ☐ + 3

Unified School District No. 1
Racine, Wisconsin

## II. Review Exercises

NAME _____

SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5 | 4 | 6 | 9 | 8 | 7 | 7 | 6 | 4 | 7 |
| +5 | +4 | +5 | +9 | +8 | +7 | +8 | +6 | +3 | +6 |

2. 24 + 35 = ☐

3. $\begin{array}{r} 87 \\ +\ 56 \\ \hline \end{array}$

4. $\begin{array}{r} 624 \\ +\ 615 \\ \hline \end{array}$

5. $\begin{array}{r} 6 \\ 9 \\ 8 \\ +\ 7 \\ \hline \end{array}$

$$\begin{array}{r} {}^{1}\ {}^{1}\ \ \\ 987 \\ +\ 649 \\ \hline 1636 \end{array}$$

6. $\begin{array}{r} 428 \\ +\ 679 \\ \hline \end{array}$

7. $\begin{array}{r} 324 \\ 513 \\ +\ 247 \\ \hline \end{array}$

8. $\begin{array}{r} 2346 \\ +\ 5827 \\ \hline \end{array}$

9. Mrs. Smith's class has 11 girls and 20 boys. How many pupils are there in Mrs. Smith's class?

☐

10. How much money must Nancy have in order to buy three gifts? One gift cost $1.28, another costs $.73 and the third one costs $2.45.

$ ☐

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## 3rd Day

**Warm Up:**

"The 10's combinations are important: 6+4, 7+3, etc. If we really know those, then 8+3 is just one more than 8+2. Adding 10 is easy; adding 9 is just one less."

**Review Activities:**

Objective: The pupil will be able to subtract up to 4d - 4d with renaming.

**Comments:** Subtraction across zeros (#8) is a source of error. Extra Practice page 307 in the back of the book is a good source for oral and board work with some written challenge. Remind pupils how to check subtraction. Use III as a culminating activity.

## 4th Day

**Warm Up:**

"Do you have a way to remember 5+7, 5+8, 6+3, 8+6? How about subtraction facts like 12-9? Do the addition facts you really know help you remember the subtraction facts?

**Review Activities:**

Objective: The pupil will be able to solve a mixed set of addition-subtraction problems.

**Comments:** Addition and subtraction errors are often caused by carelessness. Remind pupils to write problems neatly and clearly to lessen the possibility of error. Stress checking results. Use IV as a culminating activity.

## III. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +10 | | | 17 | | | | | | | | | |
| +9 | | | | | | | | | | 13 | | |

2. 7 +4 ; 9 +2 ; 10 - 6

3. 37 - 13

4. 67 - 28

5. 546 - 123

6. 782 - 514

672 - 259 = 413

check: 672 - 259 + 413 = 672

7. 8937 - 458

8. 7002 - 6685

9. Bob had 162 books in his house. He let his friend Tom have 38 of them. How many does he have left?

10. Joan saved $57.30 for a trip to Chicago. The bus ticket cost $5.35. How much money did she have left to spend in Chicago?

$

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## IV. Review Exercises

NAME _____

SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 5 + 7 | 6 + 8 | 5 + 8 | 6 + 3 | 15 - 9 | 5 + 8 | 15 - 7 | 5 + 3 | 8 - 5 | 12 - 9 |

Objective: The pupil will be able to subtract up to 4d - 4d with renaming.

Comments: Subtraction across zeros (#8) is a source of error. Extra Practice page 307 in the back of the book is a good source for oral and board work with some written challenge. Remind pupils how to check subtraction. Use III as a culminating activity.

Objective: The pupil will be able to solve a mixed set of addition-subtraction problems.

Comments: Addition and subtraction errors are often caused by carelessness. Remind pupils to write problems neatly and clearly to lessen the possibility of error. Stress checking results. Use IV as a culminating activity.

## III. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +10 | | | 17 | | | | | | | | | |
| +9 | | | | | | | | | | 13 | | |

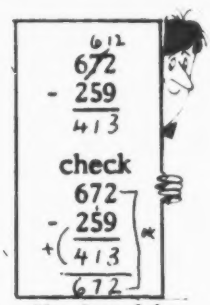
2. 7 +4 ; 9 +2 ; 10 - 6

3. 37 - 13

4. 67 - 28

5. 546 - 123

6. 782 - 514




7. 8937 - 458

8. 7002 - 6685

9. Bob had 162 books in his house. He let his friend Tom have 38 of them. How many does he have left?

10. Joan saved $57.30 for a trip to Chicago. The bus ticket cost $5.35. How much money did she have left to spend in Chicago?

$

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## IV. Review Exercises

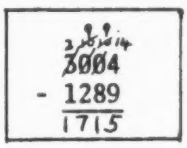
NAME _____
SCORE _____

1. 5 + 7 ; 6 + 8 ; 5 + 8 ; 6 + 3 ; 15 - 9 ; 5 + 8 ; 15 - 7 ; 5 + 3 ; 8 - 5 ; 12 - 9

2. 473 - 299

3. 734 - 367

4. 1314 + 1516 + 1718




5. 114 + 228 + 3674

6. 503 - 219

7. 6002 - 2572

8. The town of Bend has 5003 people. Osborn has 2374 people. How many more live in Bend?

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## 5th Day

Warm Up:
"Which facts are giving us trouble? Should we use only those facts that need work? How about Subtraction facts?"

Review Activities:

Objective: The pupils will be able to add and subtract fractions and reduce to lowest terms.

Comments: This is the only review lesson that is not contained in the first Learning Stage but in the second. This could be a good time to see how much pupils remember of fractions. Review reducing to lowest terms to remind them of the process. Use V.

## 6th Day

Warm Up:
"How good are you at remembering multiplication facts? In the next few days we will work on the multiplication facts so that all of you will become more proficient. Multiplying by 2 are our doubles; by 4 are double the doubles; by 5 is counting by 5."

Review Activities:

Objective: The pupil will be able to multiply to 3d x 1d.

Comments: Remind pupils of multiplying by 1 and 0. Zeros in a factor seems to give pupils trouble. This review could serve well with page 26. Use VI.

## V. Review Exercises

NAME _____
SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12 | 12 | 17 | 11 | 14 | 13 | 9 | 8 | 6 | 4 |
| − 7 | − 3 | − 8 | − 6 | − 9 | − 8 | + 7 | + 3 | + 4 | + 9 |

Reduce to Lowest Terms:

2. $\frac{2}{9} + \frac{5}{9} =$

3. $\frac{5}{8} - \frac{1}{8} =$

4. $\frac{9}{10} + \frac{3}{10} =$

$\frac{12}{10} = 1\frac{2}{10} = 1\frac{1}{5}$

$3\frac{1\times3}{4\times3} = 3\frac{3}{12}$
$+ \frac{2\times4}{3\times4} \quad \frac{8}{12}$
$3\frac{11}{12}$

$8\frac{3\times4}{5\times4} = 8\frac{12}{20} = 7\frac{32}{20}$
$- 2\frac{3\times5}{4\times5} = 2\frac{15}{20} - 2\frac{15}{20}$
$5\frac{17}{20}$

5. $8\frac{1}{12} + 4\frac{1}{4}$

6. $4\frac{5}{6} - 1\frac{5}{6}$

7. $1\frac{7}{12} + 1\frac{7}{8}$

8. Mary baked cookies and a cake. The cookies called for $1\frac{1}{8}$ cups of sugar and the cake called for $\frac{3}{4}$ of a cup. How much sugar did she use?

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## VI. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x2 | | | 14 | | | | | | | | | |

783 x 5

783 x 5

and subtract fractions and reduce to lowest terms.

Comments: This is the only review lesson that is not contained in the first Learning Stage but in the second. This could be a good time to see how much pupils remember of fractions. Review reducing to lowest terms to remind them of the process. Use V.

multiply to 3d x 1d.

Comments: Remind pupils of multiplying by 1 and 0. Zeros in a factor seems to give pupils trouble. This review could serve well with page 26. Use VI.

## V. Review Exercises

NAME _____

SCORE _____

1.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 12 | 12 | 17 | 11 | 14 | 13 | 9 | 8 | 6 | 4 |
| - 7 | - 3 | - 8 | - 6 | - 9 | - 8 | + 7 | + 3 | + 4 | + 9 |

Reduce to Lowest Terms:

2. $\frac{2}{9} + \frac{5}{9} =$

3. $\frac{5}{8} - \frac{1}{8} =$

4. $\frac{9}{10} + \frac{3}{10} =$

5. $8\frac{1}{12} + 4\frac{1}{4}$

6. $4\frac{5}{6} - 1\frac{7}{8}$

7. $1\frac{7}{12} + 1\frac{7}{8}$

$\frac{12}{10} = 1\frac{2}{10} = 1\frac{1}{5}$

$3\frac{1}{4} \times \frac{3}{3} = 3\frac{3}{12}$

$+ \frac{2}{3} \times \frac{4}{4} = \frac{8}{12}$

$3\frac{11}{12}$

$8\frac{3}{5} \times \frac{4}{4} = 8\frac{12}{20} = 7\frac{32}{20}$

$- 2\frac{3}{4} \times \frac{5}{5} = 2\frac{15}{20} - 2\frac{15}{20}$

$5\frac{17}{20}$

8. Mary baked cookies and a cake. The cookies called for $1\frac{1}{8}$ cups of sugar and the cake called for $\frac{3}{4}$ of a cup. How much sugar did she use?

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Racine, Wisconsin

## VI. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x2 | | | 14 | | | | | | | | | |
| x4 | | | | | | | | 32 | | | | |
| x5 | | 25 | | | | | | | | | | |

783 x 5 = 15, 400, 3500 = 3915

$\overset{91}{783} \times 5 = 3915$

2. $68 \times 4$

3. $678 \times 2$

4. $705 \times 5$

5. $980 \times 4$

6. $307 \times 4$

7. There are 12 boys in Mrs. Thompson's cub scout den. They went on a picnic. Each boy ate 4 hot dogs. How many hot dogs did the boys eat altogether?

8. If a ship sailed on the average of 287 miles a day for 5 days, how far did it go?

Unified School District No. 1
Racine, Wisconsin

## 7th Day

**Warm Up:**

"Let's get good at multiplying by 3 and by 9. Do you see patterns that will help you remember? (3x7 = (2x7) + 7; 4x9 = 36, sum of digits in product is always 9. 10's digit is one less than number multiplied by 9.)

**Review Activities:**

Objective: The pupil will be able to multiply up to 3d x 2d.

**Comments:** Row 4 of the drill grid means 4 times 1st Row, then add 3: $(4 \times \square) + 3$. This lesson continues the multiplication algorithm to a 2-digit multiplier. Use VII.

## 8th Day

**Warm Up:**

"Let's use all of the multiplication facts that we have revieved already in our warm-up activities and add x3, x6."

**Review Activities:**

Objective: The pupil will be able to multiply up to 3d x 3d.

**Comments:** Discovering More About Numbers page 337 in back of book could be explored for enrichment. Make note of "middle zero" difficulties your pupils may be having. Use VIII.

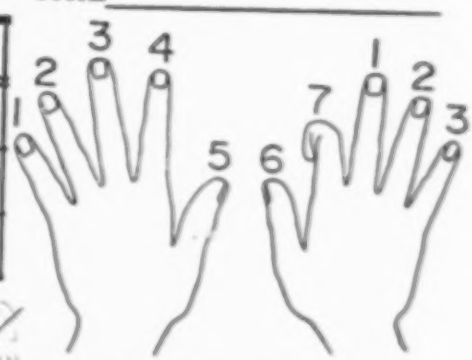
## VII. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| x3 | | 15 | | | | | | | | | |
| x9 | | | | 54 | | | | | | | |
| x 4; +3 | | | | | | | 11 | | | | |



2. 61 x 34

3. 85 x 93

4. 123 x 42

Did you know that you could use your fingers to multiply by 9? 7x9 -- Bend the 7th finger; 6 to the left are 6 tens or 60, 3 to the right are 3 ones or 3, thus 7x9 = 63. Try other products. Does it work?

5. 609 x 43

6. 508 x 29

7. A warehouse shipped 15 cases of paper napkins to a store. The napkins sold for $8.80 a case. What was the total cost of the shipment?

$ _____

605 x 39 → 5445, 18150, 23595

## VIII. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x3 | | | | | | | | 6 | | | | |
| | | | | | | | | | | | | |

249 x 529 → 2241

986 x 302 → 1972

Objective: The pupil will be able to multiply up to 3d x 2d.

Comments: Row 4 of the drill grid means 4 times 1st Row, then add 3: $(4 \times \square) + 3$. This lesson continues the multiplication algorithm to a 2-digit multiplier. Use VII.

Objective: The pupil will be able to multiply up to 3d x 3d.

Comments: Discovering More About Numbers page 337 in back of book could be explored for enrichment. Make note of "middle zero" difficulties your pupils may be having. Use VIII.

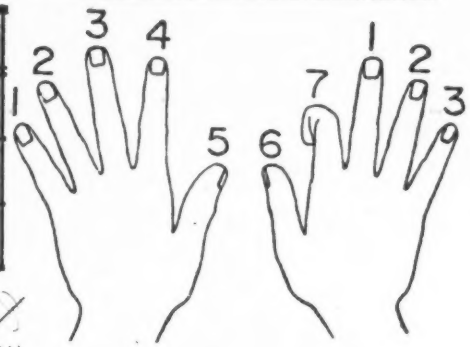
## VII. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| x3 | | 15 | | | | | | | | | |
| x9 | | | | 54 | | | | | | | |
| x 4; +3 | | | | | | | 11 | | | | |




2. 61 x 34

3. 85 x 93

4. 123 x 42

Did you know that you could use your fingers to multiply by 9? 7x9 -- Bend the 7th finger; 6 to the left are 6 tens or 60, 3 to the right are 3 ones or 3, thus 7x9 = 63. Try other products. Does it work?

5. 609 x 43

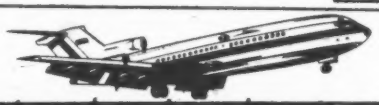
6. 508 x 29

| |
|---|
| 605 |
| x 39 |
| 5445 |
| 18150 |
| 23595 |

7. A warehouse shipped 15 cases of paper napkins to a store. The napkins sold for $8.80 a case. What was the total cost of the shipment?

$ _____

## VIII. Review Exercises



NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x3 | | | | | | | | 6 | | | | |
| x6 | | | | | | | | | | | | 600 |
| x5; +4 | | 29 | | | | | | | | | | |

| | |
|---|---|
| 249 | 986 |
| x 529 | x 302 |
| 2241 | 1972 |
| 4980 | 29580 |
| 124500 | 297772 |
| 131721 | |

2. 32 x 36

3. 241 x 61

4. 116 x 263

5. 825 x 306

## 9th Day

arm Up:
Is there a relationship between multiplying y 4 and by 8?"

Review Activities:

Objective: The pupil will be able to divide up to 5d ÷ 2d no remainder.

Comments: Your pupils should be using the division algorithm but some may still be using the "ladder" method. Hopefully the transition will be made. Again this lesson will work well with the pages of the first Learning Stage. (pp 34-41) Use IX.

## 10th Day

Warm Up:
"How about multiplying by 7? 'Knowing' the multiplication facts aids in remembering the division facts."

Review Activities:

Objective: The pupil will be able to divide up to 4d ÷ 2d with remainder; find the average of a set of numbers.

Comments: The idea of average should be discussed as a process -- add and divide. The statistical implications of average is a nice enrichment topic. Stress checking of division problems. Use X.

## IX. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X4 | | | | | | | 8 | | | | | |
| X8 | | | | | | | | | | 32 | | |
| X3; +6 | | 20 | | | | | | | | | | |

$$\begin{array}{r} \$6.70 \\ 84\overline{)\$562.80} \\ 504 \\ \hline 588 \\ 588 \\ \hline 0 \end{array} \qquad \begin{array}{r} 6.70 \\ \times\ 84 \\ \hline 2680 \\ 5360 \\ \hline \$562.80 \end{array}$$

2. $6\overline{)348}$ 3. $8\overline{)4976}$ 4. $9\overline{)4536}$

5. $83\overline{)913}$ 6. $67\overline{)\$83.08}$ 7. $22\overline{)52074}$

Unified School District No. 1
Racine, Wisconsin

8. A jet made a trip from Seattle to Rome, a distance of about 5800 miles, in 11 hours. About what was the average speed of the plane? (Round off answer to nearest whole number.)

## X. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X7 | | | | | | 7 | | | | | | |

2. $6\overline{)42}$ $4\overline{)36}$

$8\overline{)56}$ $4\overline{)28}$

up to 5d + 2d no remainder.

Comments: Your pupils should be using the division algorithm but some may still be using the "ladder" method. Hopefully the transition will be made. Again this lesson will work well with the pages of the first Learning Stage. (pp 34-41) Use IX.

Objective: The pupil will be able to divide up to 4d + 2d with remainder; find the average of a set of numbers.

Comments: The idea of average should be discussed as a process -- add and divide. The statistical implications of average is a nice enrichment topic. Stress checking of division problems. Use X.

## IX. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X4 | | | | | | | 8 | | | | | |
| X8 | | | | | | | | | | 32 | | |
| X3; +6 | | 20 | | | | | | | | | | |

$6.70
84)$562.80
504
588
588
0

6.70
× 84
2680
5360
$562.80

2. 6)348

3. 8)4976

4. 9)4536

5. 83)913

6. 67)$83.08

7. 22)52074

Unified School District No. 1
Racine, Wisconsin

8. A jet made a trip from Seattle to Rome, a distance of about 5800 miles, in 11 hours. About what was the average speed of the plane? (Round off answer to nearest whole number.)

## X. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X7 | | | | | | 7 | | | | | | |
| X50 | | | | | | | | 400 | | | | |
| X70 | | | | 420 | | | | | | | | |

2. 6)42 4)36

8)56 4)28

5)30 9)81

3. 51)4012

4. 73)2914

5. 79)4264

98)7651
686
791
784
7

Check
98
× 79
882
686
7644
+ 7
7651

6. Find the average of the following test scores: 76, 84, 88, 92, 85.

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Racine, Wisconsin

## 11th Day

**Warm Up:**

"In one Warm Up activity, I'm going to choose basic facts from addition, subtraction, multiplication or division."

**Review Activities:**

Objective: The pupil will review addition and subtraction of decimals; multiplication using money.

**Comments:** This is a review of addition, subtraction and multiplication using decimals. At this point, just remind pupils to keep the decimal point "in line." Use XI.

## 12th Day

**Warm Up:**

"We will continue to keep skillful with basic facts."

**Review Activities:**

Objective: The pupil will be able to multiply fractions.

**Comments:** Remind pupils of the "method" -- multiply numerators, denominators, and reduce -- wait for Learning Stage 3 to reestablish understanding. Have children notemodel problems in "box."

## XI. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x30 | | | | | | | | | | | | |
| x40 | | | | | | | | | | | | |
| x9; +3 | | | | | | | | | | | | |

2. 13.6 + 9.2

3. 3.528 - 1.694

4. 3.72 + 4.05 + 7.21

5. $3.24 x 26

6. 52 - 17.89 =

7. 3.02 + 14.143 =

8. A store sold 92 notebooks for a total of $35.88. Each notebook was the same price. How much did each notebook cost? $ ____

Unified School District No. 1
Racine, Wisconsin

## XII. Review Exercises

NAME _____

SCORE _____

1. 8 + 7 = 14 - 6 = 9 x 6 = 7)49 = 7 x 8 = 6 x 7 = 15 - 6 = 17 - 9 = 4)36 = 300 + 800 =

Objective: The pupil will review addition and subtraction of decimals; multiplication using money.

Comments: This is a review of addition, subtraction and multiplication using decimals. At this point, just remind pupils to keep the decimal point "in line." Use XI.

Objective: The pupil will be able to multiply fractions.

Comments: Remind pupils of the "method" -- multiply numerators, denominators, and reduce -- wait for Learning Stage 3 to reestablish understanding. Have children notemodel problems in "box."

## XI. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 8 | 2 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x30 | | | | | | | | | | | | |
| x40 | | | | | | | | | | | | |
| x9; +3 | | | | | | | | | | | | |

2. $\begin{array}{r} 13.6 \\ +\ 9.2 \\ \hline \end{array}$

3. $\begin{array}{r} 3.528 \\ -\ 1.694 \\ \hline \end{array}$

4. $\begin{array}{r} 3.72 \\ 4.05 \\ +\ 7.21 \\ \hline \end{array}$

5. $\begin{array}{r} \$3.24 \\ \times\ 26 \\ \hline \end{array}$

6. 52 - 17.89 =

7. 3.02 + 14.143 =

8. A store sold 92 notebooks for a total of $35.88. Each notebook was the same price. How much did each notebook cost?

$ ____

Unified School District No. 1
Racine, Wisconsin

## XII. Review Exercises

NAME _____

SCORE _____

1. $\begin{array}{r} 8 \\ +\ 7 \\ \hline \end{array}$ $\begin{array}{r} 14 \\ -\ 6 \\ \hline \end{array}$ $\begin{array}{r} 9 \\ \times\ 6 \\ \hline \end{array}$ $7\overline{)49}$ $\begin{array}{r} 7 \\ \times\ 8 \\ \hline \end{array}$ $\begin{array}{r} 6 \\ \times\ 7 \\ \hline \end{array}$ $\begin{array}{r} 15 \\ -\ 6 \\ \hline \end{array}$ $\begin{array}{r} 17 \\ -\ 9 \\ \hline \end{array}$ $4\overline{)36}$ $\begin{array}{r} 300 \\ +\ 800 \\ \hline \end{array}$

2. $\frac{2}{3} \times \frac{2}{3} =$

3. $\frac{1}{3} \times 5 =$

4. $4 \times \frac{3}{8} =$

5. $\frac{1}{4}$ of 24 =

6. $\frac{3}{8}$ of 48 =

7. Bob took a math test with 20 problems. He got $\frac{3}{4}$ of them right. How many did he answer correctly?

____

$\frac{3}{4}$ of 48 $= \frac{3}{4} \times \frac{48}{1}$

$= \frac{3 \times 48}{4 \times 1} = \frac{144}{4} = 36$

$\frac{2}{3} \times \frac{5}{9} = \frac{2 \times 5}{3 \times 9} = \frac{10}{27}$

$\frac{1}{3}$ of 2 ft. = 8 in.

$\frac{1}{3} \times \frac{24}{1} = \frac{24}{3} = 8$

$\frac{3}{4} \times \frac{5}{7} = \frac{3 \times 5}{4 \times 7} = \frac{15}{28}$

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Racine, Wisconsin

## 13th Day

**Warm Up:**

"Which facts should we use in our activities today?"

**Review Activities:**

Objective: Mixed problems

**Comments:** This is a random set of mixed problems. A mixed set of problems of this type given almost daily will help keep pupils skillful in topics that were previously covered. This is especially true when you are covering a topic like fractions and "leave" whole numbers. Use XIII.

## 14th Day

**Warm Up:**

"How about just subtraction facts today?"

**Review Activities:**

Objective: Mixed Problems

**Comments:** It is hoped that you will make every effort to move into Learning Stage 2 on "schedule." While working in L.S. 2 you should continue to review the operations with whole numbers keeping pupils skillful on a continual basis. The Warm Up Activities should be continued using more challenging "mental" arithmetic as pupils become skillful in Basic Facts. Use XIV.

## XIII. Review Exercises

NAME _____

SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x6 | | | | | 0 | | | | | | | |
| x8 | | | | | | | | | 80 | | | |
| +7 | | | | | | | 9 | | | | | |

2. 1843 + 249 + 9029 + 4614

3. 623 x 95

4. 67)5025

5. 3000 - 1651

Unified School District No. 1
Racine, Wisconsin

6. $3\frac{3}{5} + 4\frac{4}{5}$

7. 600 x 600 =

8. Find the average of the following spelling test scores:
18, 14, 19, 20, 19

## XIV. Review Exercises

NAME _____

SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11 | 12 | 14 | 11 | 12 | 14 | 13 | 17 | 18 | 16 |
| - 3 | - 5 | - 5 | - 6 | - 4 | - 9 | - 8 | - 8 | - 9 | - 7 |

Objective: Mixed problems

Comments: This is a random set of mixed problems. A mixed set of problems of this type given almost daily will help keep pupils skillful in topics that were previously covered. This is especially true when you are covering a topic like fractions and "leave" whole numbers. Use XIII.

Objective: Mixed Problems

Comments: It is hoped that you will make every effort to move into Learning Stage 2 on "schedule." While working in L.S. 2 you should continue to review the operations with whole numbers keeping pupils skillful on a continual basis. The Warm Up Activities should be continued using more challenging "mental" arithmetic as pupils become skillful in Basic Facts. Use XIV.

## XIII. Review Exercises

NAME _____
SCORE _____

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| x6 | | | | | 0 | | | | | | | |
| x8 | | | | | | | | | 80 | | | |
| +7 | | | | | | | 9 | | | | | |

2. 1843 + 249 + 9029 + 4614

3. 623 x 95

4. 67)5025

5. 3000 - 1651

6. $3\frac{3}{5} + 4\frac{4}{5}$

7. 600 x 600 =

8. Find the average of the following spelling test scores: 18, 14, 19, 20, 19

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## XIV. Review Exercises

NAME _____
SCORE _____

1.

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 11 - 3 | 12 - 5 | 14 - 5 | 11 - 6 | 12 - 4 | 14 - 9 | 13 - 8 | 17 - 8 | 18 - 9 | 16 - 7 |

2. 16 + ☐ = 33

3. 56 + ☐ = 8

4. ☐ - 18 = 23

5. 9 x ☐ = 108

6. ☐ + 24 = 1

7. 18 x 9 = ☐ x 18

8. (5x8) x 6 = 5 x ( x )

9. 3 x (4+2) = 12 + ( ☐ x 2)

10. ☐ + 125 = 125

11. 5 + 5 + 5 + 5 + 5 + 5 + 5 + 5 = ☐ x 5

# Grade Seven Review

Division of Instructional Services
Unified School District No. 1 of Racine County
Racine, Wisconsin

Department of Mathematics

TO: Junior High School Principals
All Seventh Grade Mathematics Teachers

FROM: John D. Aceto, Consultant in Mathematics

SUBJECT: Review Program for Computational Skills

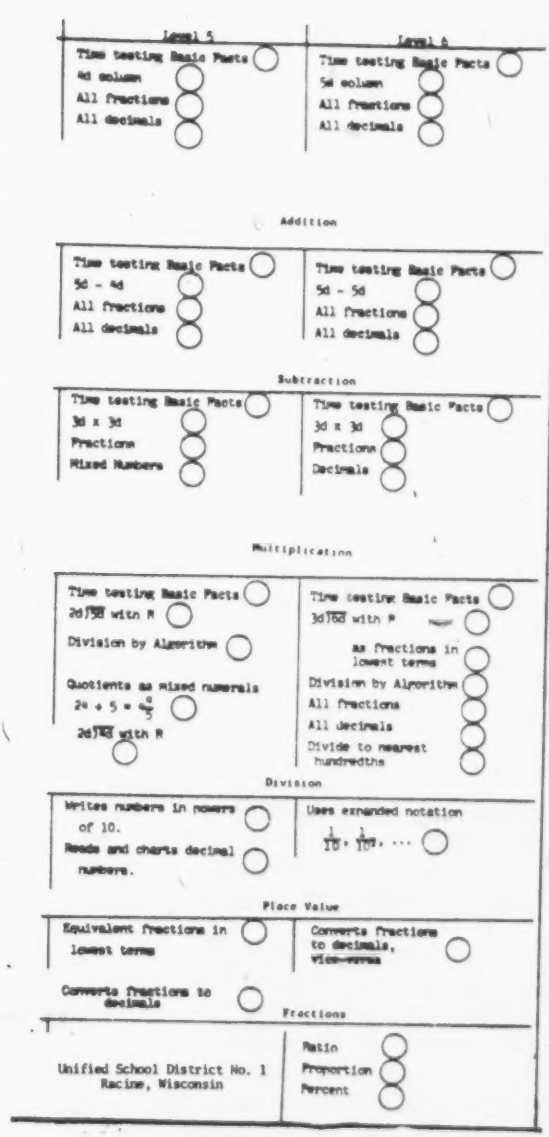
We recognize that our pupils need a reminder of the arithmetic skills learned in previous years and practice to maintain them. This package is designed to help meet these needs. It is a series of brief review exercises to be used during the 2nd, 3rd, and 4th weeks of school.

All of the mathematics in this package is legitimate elementary school mathematics. All of your students have been exposed to the mathematics this package contains. It would be unrealistic to expect top performance on a diagnostic test on the first day of school. It would also waste teacher's time to prescribe remedial work for students who only need a brief reminder of skills previously learned in order to do well at them. This set is intended to provide that brief review. It may be assumed then that students who fail a specific diagnostic item need more than a brief review of that particular skill.

Please give one review exercise each day. Either copy the exercises on the chalkboard or supply ditto copies from a thermofax master made from the contents of this package. Have the pupils correct the solutions during class, discussing exercises causing trouble. Continue with your usual mathematics lessons, but use these reviews as a guide assigning extra practice.

During the fifth week you will be asked to give a test which will be in the standardized test format. The results will be analyzed on a district-wide basis giving us diagnostic capabilities to better provide for individual needs of our pupils.

If I can render any assistance, please do not hesitate to call.




## Time Division

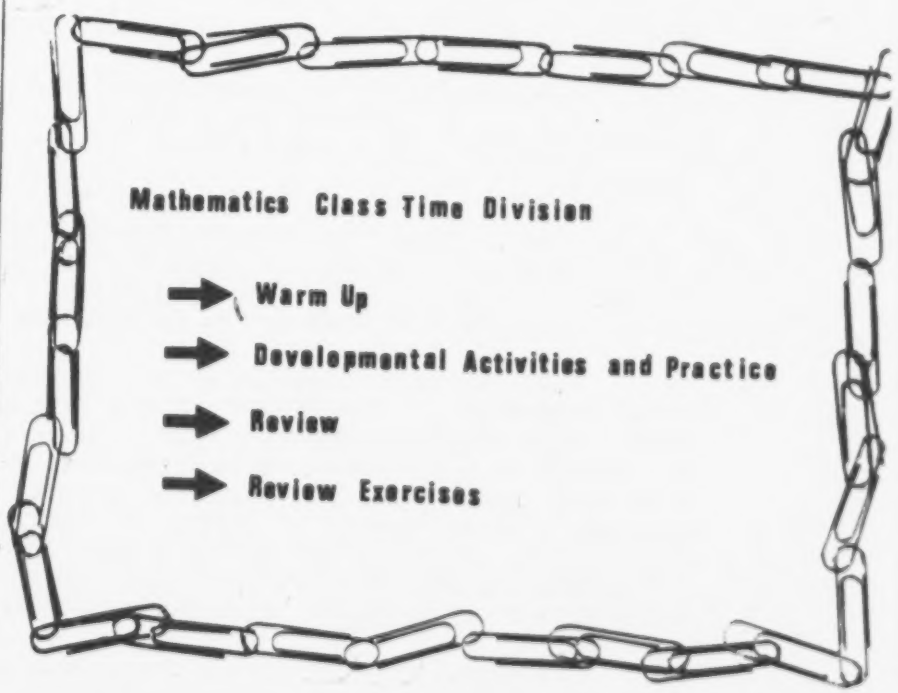
Many teachers have found the time division at the right to be very effective.

The chart at the left represents the exposure of the computation component of our District's mathematics program for grades 5 and 6.

On the basis of test results for the junior high school population there is an apparent need to develop and maintain computational skills on a regular basis. The contents of this package and/or contents of the 5th and 6th grade review package could be used to help remind pupils and give you information on what the needs of our pupils are in computation.

Much work has been done at the elementary school to better prepare your pupils; this effort must be continued.

As you use this package and/or other packages you may want pairs of pupils or small groups of pupils, as well as individual pupils, to complete the exercises. The objective is to get all pupils skillful and remain skillful.



Warm up (Day-by-day activities are suggested in the 6th grade package.) Warm up is intended to stimulate pupils and maintain skills in Basic Facts. A two to five minute activity at the beginning of each math period is usually quite effective. These activities can take the form of contests, flash card drills, mental arithmetic and other competative type activities.

Developmental Activity is the heart of the mathematics lesson when pupils are involved in learning, discovering and exploring mathematics; practicing and refining understanding.

Review serves as instructional closure; maintaining computational skills, maintaining problem solving skills, remediating, and enriching.

## I Addition - Whole Numbers

Objectives

a) To review whole number addition
b) To review column addition
c) To review addition of money

Warm Up

"During the next two weeks we will review the basic facts at the beginning of each math class. Let's see how well you know the addition facts for 3, 7, 9.

Comments

a) Remind students to place decimals under each other when adding or subtracting. (Problem 4)
b) Problem 8 involves subtraction.

Answers

2) 679 3) 94 4) $23.90 5) 259 6) 4070 7) 2708 8) 18 9) 473 10) 66,884 cars

## II Subtraction - Whole Numbers

Objectives

a) To review whole number subtraction to 5d minus 5d
b) To review subtraction of money

Warm Up

"Basic subtraction facts, simple? Let's see if you can subtract using 4, 3 and 6.

Comments

a) Problem 6 involves addition. Now may be the time to review the relations between addition and subtraction as inverse operations.

Answers

2) 34 3) 724 4) 457 5) 1086 6) 7172 7) 4128 8) 6715 9) 54489 10) 1,198 people fewer

----cut to make thermofax master----

NAME _____
SCORE _____

## I Addition - Whole Numbers

| + | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | | | | | | | | | 13 | | | |
| 7 | | | | | 7 | | | | | | | |
| 9 | | 14 | | | | | | | | | | |

2. 552 + 127

3. 75 + 19

4. $5.47 + $8.86 = $9.57

5. 195 + 64

6. 3998 + 72

7. 750 + 435 + 908 + 615 =

8. 34 + ☐ = 52

9. 346 - ☐ = 127

10. During one week, just after the new models appeared, the production of three makes of cars was: Chevrolet 32,264; Ford 28,788; Plymouth 5,832. How many cars were produced that week?

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Racine, Wisconsin

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SCORE _____

## II Subtraction - Whole Numbers

| - | 6 | 8 | 14 | 7 | 30 | 10 | 25 | 9 | 12 | 15 | 20 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | | | | 3 | | | | | | | | |
| 3 | | 5 | | | | | | | | | | |

Comments

a) Remind students to place decimals under each other when adding or subtracting. (Problem 4)
b) Problem 8 involves subtraction.

Answers

2) 679 3) 94 4) $23.90 5) 259 6) 4070 7) 2708 8) 18 9) 473 10) 66,884 cars

Comments

a) Problem 6 involves addition. Now may be the time to review the relations between addition and subtraction as inverse operations.

Answers

2) 34 3) 724 4) 457 5) 1086 6) 7172 7) 4128 8) 6715 9) 54489 10) 1,198 people fewer

cut to make thermofax master

NAME _____
SCORE _____

## I Addition - Whole Numbers

| + | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | | | | | | | | | 13 | | | |
| 7 | | | | | 7 | | | | | | | |
| 9 | | 14 | | | | | | | | | | |

2. 552 + 127

3. 75 + 19

4. $5.47 + $8.86 = $9.57

5. 195 + 64

6. 3998 + 72

7. 750 + 435 + 908 + 615 =

8. 34 + ☐ = 52

9. 346 - ☐ = 127

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Racine, Wisconsin

NAME _____
SCORE _____

## II Subtraction - Whole Numbers

| − | 6 | 8 | 14 | 7 | 30 | 10 | 25 | 9 | 12 | 15 | 20 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4 | | | | 3 | | | | | | | | |
| 3 | | 5 | | | | | | | | | | |
| 6 | | | | | | | | | 6 | | | |

2. 37 - 13

3. 782 - 58

4. 535 - 78

5. 3937 - 2851

6. 7251 + 79 =

7. 4306 - 178

8. 8004 - 1289

9. 56,163 - 1,674

10. At an international amateur hockey game, there was a sellout crowd of 4065. At another game in the same tournament, the crowd was only 2867. How many fewer persons were at the second game?

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Racine, Wisconsin

III Multiplication of Whole Numbers.

Objectives

a) To review multiplication of whole numbers to 5dx5d
b) To review multiplication of dollars times a whole number

Warm Up

Do you recall the basic multiplication facts?

Comment

a) Remind students that decimal points must be properly placed in decimal products. Problem 4.
b) Problem 6 is a feet to inches conversion.
c) Explain the meaning of "average" as used in problem 7
d) Problems 8, 9, 10 are missing factor sentences.

Answers

1. 15,466 2. 3551 3. 162 4. $32.80 5. 608 6. 252 sq. in. 7. 4,880 in. 8. 8 9. 80 10. 88

IV Division of Whole Numbers

Objectives

a) To review division of whole number to 5d : 2d
b) To review division of dollars by a whole number

Warm Up

If you know how to divide by 5, is it easier to divide by 50?

Comments

a) The table is a multiplication exercise intenced to aid the student with some of the dursion work.
b) Some students may not be using a mature division algorithm
c) Problem 6 is a multiplication problem.
d) Problem 7 and 8 require proper placement of the decimal point.

Answers

1. 8R3 2. 607R4 3. 790R4 4. 50R3 5. 52R39 6. 57 7. $6.34 8. $3.52 9. 8 10. 105R28

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III Multiplication of Whole Numbers

NAME_____

SCORE_____

Complete this table

| X | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |

Find these products

1. 209 x 74
2. 53 x 67
3. 18 x 9
4. $3.28 x.10
5. 304 x 2
6. What is the area in square inches of a rectangular region 3 feet long and 7 inches wide?

Unified School District No. 1
Racine, Wisconsin

7. If an airplane travels at an average speed of 610 miles an hour, how far will it travel in 8 hours?

8. ☐ x 6 = 48
9. ☐ x 6 = 480
10. ☐ x 6 = 528

IV Division of Whole Numbers

NAME_____

SCORE_____

Complete this table

| X | 2 | 4 | 8 | 10 | 100 |
|---|---|---|---|---|---|
| 7 | | | | | |

1. $7\overline{)59}$
2. $8\overline{)4860}$
3. $9\overline{)7114}$
4. $60\overline{)3003}$
5. $57\overline{)3003}$

Problem 4.

b) Problem 6 is a feet to inches conversion.
c) Explain the meaning of "average" as used in problem 7
d) Problems 8, 9, 10 are missing factor sentences.

Answers
1. 15,466 2. 3551 3. 162 4. $32.80 5. 608
6. 252 sq. in. 7. 4,880 in. 8. 8 9. 80
10. 88

tenced to aid the student with some of the dursion work.
b) Some students may not be using a mature division algorithm
c) Problem 6 is a multiplication problem.
d) Problem 7 and 8 require proper placement of the decimal point.

Answers
1. 8R3 2. 607R4 3. 790R4 4. 50R3 5. 52R39
6. 57 7. $6.34 8. $3.52 9. 8 10. 105R28

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NAME_____
SCORE_____

## III Multiplication of Whole Numbers

Complete this table

| X | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |

Find these products

1. 209 x74
2. 53 x67
3. 18 x9
4. $3.28 x.10
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6. What is the area in square inches of a rectangular region 3 feet long and 7 inches wide?

Unified School District No. 1
Racine, Wisconsin

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8. ☐ x 6 = 48
9. ☐ x 6 = 480
10. ☐ x 6 = 528

---

NAME_____
SCORE_____

## IV Division of Whole Numbers

Complete this table

| X | 2 | 4 | 8 | 10 | 100 |
|---|---|---|---|---|---|
| 7 | | | | | |
| 50 | | | | | |
| 57 | | | | | |

1. $7\overline{)56}$
2. $8\overline{)4860}$
3. $9\overline{)7114}$
4. $60\overline{)3003}$
5. $57\overline{)3003}$

Unified School District No. 1
Racine, Wisconsin

6. 456 ÷ ☐ = 8
7. $52\overline{)\$329.68}$
8. $7\overline{)\$24.64}$
9. 56 ÷ 7 =
10. $36\overline{)3803}$

VII Fractions - Multiplications

Objectives

a) To review reducing of simple fractions. Unreduced fractions whose numerator and denominator have a G.C.E. of 2, 3, 5 & 10
b) To review the product of common fractions with reducing
c) To review the product of a unit fraction and a whole number as a quotient.
d) To review changing fractions to mixed forms.

Warm Up

What number divides both 12 and 16? Is that the largest such number? What is the difference between $\frac{6}{17}$ and $\frac{7}{17}$

Comments

The table is a list of the multiples of 3 and 7. Problem 7 is a "double reducing.

Answers 1) $\frac{3}{7}$ 2) $2\frac{1}{3}$ 3) $\frac{7}{12}$ 4) $\frac{4}{5}$ 5) $\frac{4}{7}$ 6) $\frac{13}{30}$ 7) $6\frac{2}{3}$ 8) 3 9) 49 10) 64

VIII Fractions - Addition and Subtractions

Objectives

a) To review addition and subtraction of fractions with a common denominator.
b) Adding and subtracting fractions with unlike denominators. $d_1 = nd_2$

Warm Up

What is the sum of 6 cats and 7 cats? What is the sum of and

Comments

Simple addition. No renaming from 1's place

Answers

1) $\frac{11}{13}$ 2) $\frac{5}{6}$ 3) $\frac{1}{2}$ 4) $11\frac{5}{8}$ 5) $10\frac{7}{10}$ 6) $\frac{5}{17}$ 7) $5\frac{1}{2}$ 8) $\frac{2}{9}$ 9) $6\frac{1}{2}$ 10) $\frac{1}{2}$

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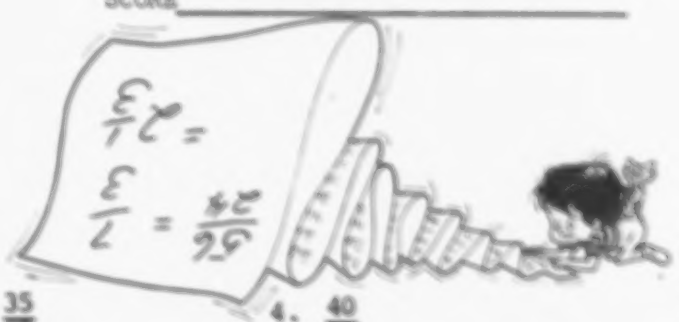
VII Fractions - Multiplications

NAME _____

SCORE _____

Complete this table

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 6 | 9 | 12 | | | | |
| | 14 | | 35 | | | | 56 |



1. $\frac{9}{21}$ 2. $\frac{42}{18}$ 3. $\frac{35}{60}$ 4. $\frac{40}{50}$

5. $\frac{2}{3} \times \frac{6}{7} =$ 6. $\frac{3}{5} \times \frac{13}{18} =$ 7. $\frac{32}{27} \times \frac{45}{8} =$

8. $\frac{1}{5}$ of 15 = 9. $\frac{1}{7}$ of 343 = 10. $\frac{1}{16}$ of 1024 =

Bethel School District No. 1
Bethel, Washington

VIII Fractions - Addition and Subtraction

NAME _____

SCORE _____

1. $\frac{7}{8} + \frac{5}{8} =$ 2. $3\frac{2}{3} + 1\frac{1}{3} =$ 3. $1\frac{1}{2} + 1\frac{1}{2} =$ 4. $1\frac{1}{2} + 1\frac{1}{2} =$

Warm Up

What number divides both 12 and 16? Is that the largest such number? What is the difference between $\frac{6}{17}$ and $\frac{7}{17}$

Comments

The table is a list of the multiples of 3 and 7. Problem 7 is a "double reducing.

Answers 1) $\frac{3}{7}$ 2) $2\frac{1}{3}$ 3) $\frac{7}{12}$ 4) $\frac{4}{5}$ 5) $\frac{4}{7}$ 6) $\frac{13}{30}$ 7) $6\frac{2}{3}$ 8) 3 9) 49 10) 64

Simple addition. No renaming from 1's place

Answers

1) $\frac{11}{13}$ 2) $\frac{5}{6}$ 3) $\frac{1}{2}$ 4) $11\frac{5}{8}$ 5) $10\frac{7}{10}$ 6) $\frac{5}{17}$

7) $5\frac{1}{2}$ 8) $\frac{2}{9}$ 9) $6\frac{1}{2}$ 10) $\frac{1}{2}$

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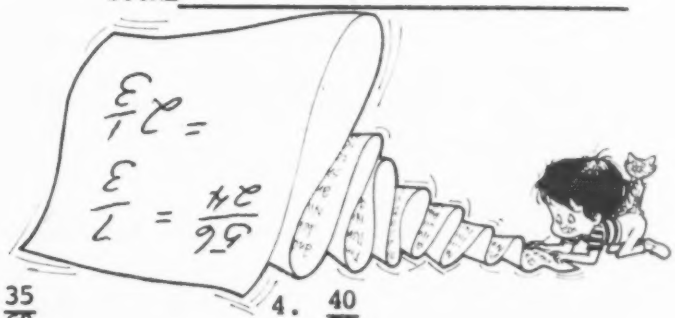
## VII Fractions - Multiplications

NAME _____

SCORE _____

Complete this table

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | 6 | 9 | 12 | | | | |
| | 14 | | 35 | | | | 56 |



1. $\frac{9}{21}$ 2. $\frac{42}{18}$ 3. $\frac{35}{60}$ 4. $\frac{40}{50}$

5. $\frac{2}{3} \times \frac{6}{7} =$ 6. $\frac{3}{5} \times \frac{13}{18} =$ 7. $\frac{32}{27} \times \frac{45}{8} =$

8. $\frac{1}{5}$ of 15 = 9. $\frac{1}{7}$ of 343 = 10. $\frac{1}{16}$ of 1024 =

Unified School District No. 1
Racine, Wisconsin

## VIII Fractions - Addition and Subtraction

NAME _____

SCORE _____

1. $\frac{7}{13} + \frac{5}{13} =$ 2. $\frac{2}{3} + \frac{1}{6} =$ 3. $\frac{1}{3} + \frac{1}{6} =$ 4. $5\frac{1}{4} + 6\frac{3}{8}$ 5. $8\frac{3}{5} + 2\frac{1}{10}$

6. $\frac{9}{17} - \frac{4}{17} =$ 7. $7\frac{5}{6} - 2\frac{1}{3}$ 8. $\frac{2}{3} - \frac{4}{9} =$ 9. $8\frac{3}{4} - 2\frac{1}{4}$ 10. $\frac{11}{16} - \frac{3}{16} =$

Unified School District No. 1
Racine, Wisconsin

V Addition - Subtraction - Decimals

Objective

To review decimal addition and subtraction

Warm Up

"Recalling the basic facts, let's put two operations together."

Comments

a) Stress the importance of neatness in arranging the same place value digits below each other.
b) Problem 3 tests place value understanding

Answers

2) 6.52 3) 54.761 4) 26.61 5) 2.51
6) 19.117 7) 9.74 in. 8) 10, 1, $\frac{1}{10}$, $\frac{1}{100}$, $\frac{1}{1000}$
9) 63.46 10) 72.78

VI Multiplication - Division - Decimals

Objective

To review multiplication and division of two decimals

Warm Up

"Try these basic division facts. Show how well you have mastered them."

Comments

a) Stress inter-relations and inverse nature of these operations
b) Review "decimal point rule"

Answers

1) $10,400 2) .40 3) 13.26 4) 3.1
5) 284 6) .8 7) 105.40 8) .0936 9) 70
10) 3.87

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NAME _____
SCORE _____

V Addition - Subtraction - Decimals

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +30 | | | | | | | 60 | | | | | |
| +15 | | | | | | | | | | | | |
| x9 +3 | | 48 | | | | | | | | | | |

2. 4.37 + 2.15

3. 36.005 + 18.756

4. Add: 1.41, 6.2, and 19

5. 2.83 - .32 =

6. 24.402 - 5.285

7. The amount of rainfall in a month is often expressed to hundredths of an inch. Newville had 3.24 inches of rainfall in January. 3.14 inches in February, and 3.36 inches in March. Newville had a total of how many inches of rainfall in these three months?

8. 65.083 = (6 x ) + (5 x ) + (0 x ) + (8 x ) + (3 x ).

9. 70.04 - 6.58 =

10. 80.16 - 7.38

Unified School District No. 1
Racine, Wisconsin

NAME _____
SCORE _____

VI Multiplication - Division (Decimals)

1. $160 x 65

2. 1.3 ) .52

3. 1.7 x 7.8

4. 9 ) 27.9

5. 5.68 x 50

arranging the same place value digits below each other.

b) Problem 3 tests place value understanding

Answers

2) 6.52 3) 54.761 4) 26.61 5) 2.51 6) 19.117 7) 9.74 in. 8) 10, 1, $\frac{1}{10}$, $\frac{1}{100}$, $\frac{1}{1000}$ 9) 63.46 10) 72.78

b) Stress inter-relations and inverse nature of these operations

b) Review "decimal point rule"

Answers

1) $10,400 2) .40 3) 13.26 4) 3.1 5) 284 6) .8 7) 105.40 8) .0936 9) 70 10) 3.87

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NAME _____

SCORE _____

V Addition - Subtraction - Decimals

1.

| | 3 | 5 | 7 | 6 | 0 | 1 | 2 | 8 | 10 | 4 | 9 | 100 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| +30 | | | | | | | 60 | | | | | |
| +15 | | | | | | | | | | | | |
| x9 +3 | | 48 | | | | | | | | | | |

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[illegible] School District No. 1
[illegible], Wisconsin

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NAME _____

SCORE _____

VI Multiplication - Division (Decimals)

1. $160 x 65

2. 1.3 ) .52

3. 1.7 x 7.8

4. 9 ) 27.9

5. 5.68 x 50

6. 8.94 x.09

7. 6 ) 632.4

8. 1.56 x.06

9. 4.9 ÷ .07 =

10. .45 x 8.6

[illegible] School District No. 1
[illegible], Wisconsin

## IX Place Value

Objective
a) State the value of a given digit in a decimal numeral ($10^3$ thru $10^6$)
b) Rewrite a numeral in expanded form as a numeral in standard form
c) Round a given number to a given place

Warm Up
What's the difference between $\frac{3}{10}$ and $3 \times \frac{1}{10}$ Which is greater .017 or .17. What do we mean by rounding? How do we write one million?

Comments
Reading written numbers often presents a problem. The word "and" has special significants in writing decimal numerals.

Answers 1) 4900 2) 90 3) 344.67 4. 0 5) 50 6) 27.6 7) 6,000,400.3 8) 6,400,003 9) thousand 10) $(2 \times 100) + (4 \times 10) + (6 \times 1) + (7 \times \frac{1}{100})$

## X Percent

Objectives
a) Change decimals to percent
b) Change percent to decimal
c) Change $\frac{1}{2}$, $\frac{1}{4}$, $\frac{3}{4}$, etc. to percent
d) Simple percent of whole numbers

Warm Up
50 cents is what percent of a dollar?

Comment
Percents have not lessen covered by all of your students.

Answers 1) 50% 2) 25% 3) 100 4) 37.5% 5) $\frac{3}{4}$ or .75 6) 30% 7) 60 8) 50% 9) 24 10) 3

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NAME_____
SCORE_____

## IX Place Value

1. 4927 rounded to the nearest hundred would be _____
2. Round 89.39 to the nearest ten. _____
3. $(3 \times 100) + (4 \times 10) + (4 \times 1) + (6 \times \frac{1}{10}) + (7 \times \frac{1}{100})$
4. $\frac{7}{10} - .7 =$ ___
5. What does the 4 in 42.76 stand for? _____
6. Write the number which is $\frac{1}{10}$ of 276 _____
7. Write: six million four hundred and 3 tenths as a numeral in standard form _____
8. Write
8. Write: six million four hundred thousand three as a numeral in standard form. _____
9. Mike rounded 27,686 to 28,000. He was rounding to the nearest _____
10. $246.07 = (2 \times$ ____$) + (4 \times$ ____$) + (6 \times$ ____$) + (7 \times$ ____$)$

Mullen School District No. 1
Mullen, Wisconsin

NAME_____
SCORE_____

## X Percent

1. $\frac{1}{2} =$ ____%
2. .25 = ____%
3. 50% of 200 is _____

37.5%!

much by reading? How do we write one million?

Comments
Reading written numbers often presents a problem. The word "and" has special significants in writing decimal numerals.

Answers 1) 4900 2) 90 3) 344.67 4. 0 5) 50 6) 27.6 7) 6,000,400.3 8) 6,400,003 9) thousand 10) $(2\times100)+(4\times10)+(6\times1)+(7\times\frac{1}{100})$

Percents have not lessen covered by all of your students.

Answers 1) 50% 2) 25% 3) 100 4) 37.5% 5) $\frac{3}{4}$ or .75 6) 30% 7) 60 8) 50% 9) 24 10) 3

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IX Place Value

NAME_____
SCORE_____

1. 4927 rounded to the nearest hundred would be _____
2. Round 89.39 to the nearest ten. _____
3. $(3\times100)+(4\times10)+(4\times1)+(6\times\frac{1}{10})+(7\times\frac{1}{100})$
4. $\frac{7}{10}-.7=$ ____
5. What does the 4 in 42.76 stand for? _____
6. Write the number which is $\frac{1}{10}$ of 276 _____
7. Write: six million four hundred and 3 tenths as a numeral in standard form _____
8. Write
8. Write: six million four hundred thousand three as a numeral in standard form. _____
9. Mike rounded 27,686 to 28,000. He was rounding to the nearest _____
10. 246.07 = (2 x ____) + (4 x ____) + (6 x ____) + (7 x ____)

Unified School District No. 1
Racine, Wisconsin

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X Percent

NAME_____
SCORE_____

1. $\frac{1}{2}$ = ____%
2. .25 = ____%
3. 50% of 200 is ____
4. $\frac{3}{8}$ = ____%
5. 75% =
6. Three dimes is what % of one dollar?____
7. 60% of 100 =
8. 25 is what percent of fifty?____
9. 12 is 50% of what number ____
10. What number is 37.5% of 8?____

Unified School District No. 1
Racine, Wisconsin

XI Mixed Problems - Part I

Objective
To review miscellaneous problems

Warm Up
How can math be used somewhere other than math class?

Comments
a) Problem 1 involves exponents
b) Problems 4 and 5 involve ratio and proportion

Answers
1) 125 2) 12 3) a. 14.2 b. 14
4) 10.67 5) 6 hrs.

XII Mixed Problems - Part II

Objective
To continue review of miscellaneous problems.

Warm Up
"Name one thing that is in no way involved with math."

Comments
a) Problem 1 deals with graph reading
b) Problem 4 involves writing a shaded portion as a percent.

Answers
1) 44,500 people 2) 6 3) 2 hrs. 45 min.
4) 25% 5) 102

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XI Mixed Problems - Part I

NAME_____
SCORE_____

1. $5^3 = \square$

2. What is the least common denominator for $\frac{5}{6}$ and $\frac{3}{4}$?

3. Round 14.17 to the nearest
   a) tenth
   b) unit

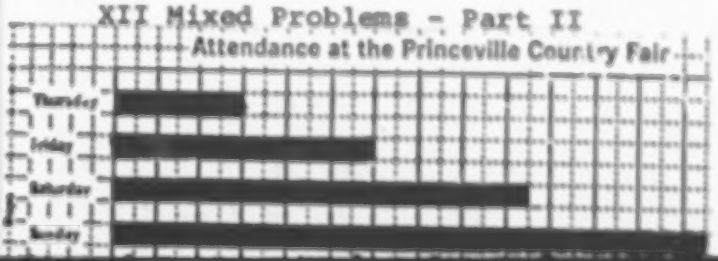
4. 6 math books cost $32. How much will two books cost? (to the nearest cent)

5. It takes a snail 7 hours to travel 42 miles. How long will it take to travel 36 inches? (to the nearest hour)

Medford School District No. 1
Medford, Wisconsin

XII Mixed Problems - Part II

NAME_____
SCORE_____




2. $10^2 \times 10^4 = 10^{\square}$

3. How long was Tom gone if he left

proportion

portion as a percent.

Answers
1) 125 2) 12 3) a. 14.2 b. 14
4) 10.67 5) 6 hrs.

Answers
1) 44,500 people 2) 6 3) 2 hrs. 45 min.
4) 25% 5) 102

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XI Mixed Problems - Part I

NAME_____
SCORE_____

1. $5^3 = \square$

2. What is the least common denominator for $\frac{5}{6}$ and $\frac{3}{4}$?

3. Round 14.17 to the nearest
   a) tenth
   b) unit

4. 6 math books cost $32. How much will two books cost? (to the nearest cent)

5. It takes a snail 7 hours to travel 42 miles. How long will it take to travel 36 inches? (to the nearest hour)

Bullard School District No. 1
Bullard, Wisconsin

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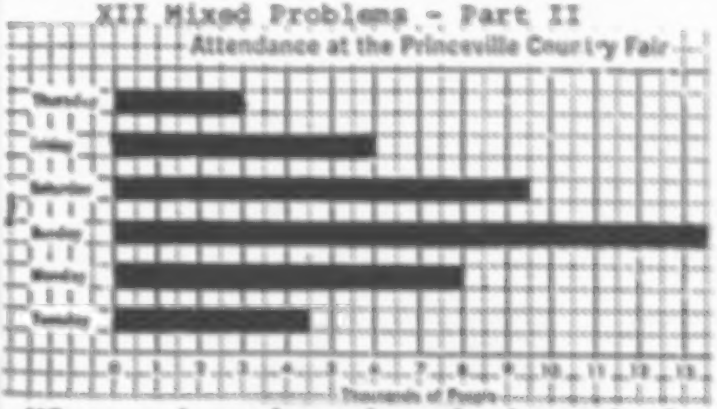
XII Mixed Problems - Part II

NAME_____
SCORE_____

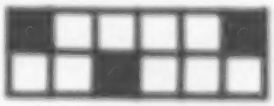



What was the total attendance for the six days?

2. $10^2 \times 10^4 = 10^{\square}$

3. How long was Tom gone if he left home at 10:20 and returned home at 1:05 p.m.?

4. What % of this figure is shaded?



5. $\frac{51}{50} = \frac{\square}{100}$

Bullard School District No. 1
Bullard, Wisconsin

Unified School District No. 1
Racine, Wisconsin

Level V - Diagnostic Test

Directions: Work the example in each box. Then look at the possible answers in that box and see if your answer is given. If it is, fill in the space on your answer sheet which has the same letter as the answer you have chosen. If your answer is not given, fill in the space for the letter beside NG (Not Given). Use a separate sheet of paper for finding your answers.

SAMPLE A:

$3\overline{)33}$

a 10
b 10 R 2
c 11
d 12
e NG

Sample

A a== b== c== d== e==

| | | |
|---|---|---|
| 1. Which digit is in the ten-thousands place in 842,561?<br><br>a. 8<br>b. 4<br>c. 2<br>d. 5<br>e. NG | 2. In which number does the 5 have the greatest value?<br><br>a. 45<br>b. 87652<br>c. 256<br>d. 3576<br>e. 99658 | 3. Round off 456 to the nearest ten.<br><br>a. 460<br>b. 450<br>c. 46<br>d. 45<br>e. NG |
| 4. $\begin{array}{r} 7563 \\ +\ 8426 \\ \hline \end{array}$<br><br>a. 15899<br>b. 15999<br>c. 15989<br>d. 16089<br>e. NG | 5. $\begin{array}{r} 744 \\ +\ 656 \\ \hline \end{array}$<br><br>a. 1390<br>b. 1490<br>c. 1300<br>d. 1400<br>e. NG | 6. $756 + (44 + 93) =$<br><br>a. 883<br>b. 783<br>c. 793<br>d. 983<br>e. NG |

| | | |
|---|---|---|
| 7. $\begin{array}{r} 584 \\ -\ 64 \\ \hline \end{array}$<br>a. 510<br>b. 520<br>c. 648<br>d. 24<br>e. NG | 8. $\begin{array}{r} 1470 \\ -\ 694 \\ \hline \end{array}$<br>a. 886<br>b. 776<br>c. 876<br>d. 786<br>e. NG | 9. $\square - 639 = 289$<br>a. 918<br>b. 818<br>c. 928<br>d. 350<br>e. NG |
| 10. At Tate Camp the boys stay one week. The first week there were 319 boys, the second 464, and the third 238. How many boys were at Tate Camp during the three weeks?<br>a. 1013<br>b. 901<br>c. 1011<br>d. 1021<br>e. NG | 11. $\begin{array}{r} 87 \\ +\ 9946 \\ \hline \end{array}$<br>a. 10023<br>b. 9923<br>c. 10033<br>d. 10032<br>e. NG | 12. $\begin{array}{r} 5463 \\ 2157 \\ +\ 8576 \\ \hline \end{array}$<br>a. 16196<br>b. 15086<br>c. 16186<br>d. 16096<br>e. NG |
| 13. $\begin{array}{r} 8795 \\ 7868 \\ +\ 8979 \\ \hline \end{array}$<br>a. 24642<br>b. 25642<br>c. 23432<br>d. 25542<br>e. NG | 14. $\begin{array}{r} \$2.74 \\ 1.96 \\ 44.57 \\ +\ 3.48 \\ \hline \end{array}$<br>a. \$52.75<br>b. \$50.55<br>c. \$52.65<br>d. \$51.75<br>e. NG | 15. $\begin{array}{r} \$14.76 \\ -\ 9.82 \\ \hline \end{array}$<br>a. \$15.14<br>b. \$5.14<br>c. \$5.94<br>d. \$4.94<br>e. NG |
| 16. $\begin{array}{r} 8315 \\ -\ 2928 \\ \hline \end{array}$<br>a. 6497<br>b. 5387<br>c. 6613<br>d. 5397<br>e. NG | 17. $\begin{array}{r} 7003 \\ -\ 4658 \\ \hline \end{array}$<br>a. 2355<br>b. 2345<br>c. 3455<br>d. 3655<br>e. NG | 18. $\begin{array}{r} 15106 \\ -\ 7589 \\ \hline \end{array}$<br>a. 7517<br>b. 8483<br>c. 8627<br>d. 7627<br>e. NG |

19. Bobby has $2.00. If he buys a model for $.88 and Hot Wheels for $.49, how much change would he get back? (All prices include tax.)

a. $.75
b. $.83
c. $.63
d. $.73
e. NG

20. $3 \times 80 =$

a. 204
b. 240
c. 24
d. 2400
e. NG

21.
$$\begin{array}{r} 51 \\ \times\ 6 \\ \hline \end{array}$$

a. 36
b. 301
c. 305
d. 306
e. NG

22.
$$\begin{array}{r} 301 \\ \times\ 4 \\ \hline \end{array}$$

a. 1216
b. 12016
c. 136
d. 1306
e. NG

23.
$$\begin{array}{r} 342 \\ \times\ 7 \\ \hline \end{array}$$

a. 2184
b. 2294
c. 2394
d. 2194
e. NG

24. Jim bought 3 books costing $.59 each. How much did he pay for the books?

a. $1.51
b. $1.57
c. $1.67
d. $1.77
e. NG

25. $56 \div 7 =$

a. 8
b. 9
c. 6
d. 7
e. NG

26. $\frac{1}{8}$ of $72 =$

a. 6
b. 7
c. 8
d. 9
e. NG

27. What is the greatest whole number that will make the sentence below true?

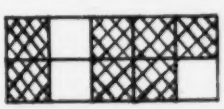
$\square \times 7 < 45$

a. 8
b. 5
c. 6
d. 7
e. NG

28. $7\overline{)45}$

a. 5 R 1
b. 6
c. 6 R 3
d. 6 R 5
e. NG

29. What fractional part of the figure is shaded?



a. $\frac{6}{10}$
b. $\frac{7}{10}$
c. $\frac{8}{10}$
d. $\frac{9}{10}$
e. NG

30. $\frac{5}{8} + \frac{2}{8} =$

a. $\frac{7}{8}$
b. $\frac{7}{16}$
c. $\frac{3}{8}$
d. $\frac{3}{16}$
e. NG

31. $\frac{6}{8} = \frac{\square}{4}$

a. 3
b. 2
c. 6
d. 12
e. NG

32. $\square \times 12 = 120$

a. 12
b. 100
c. 10
d. 5
e. NG

33.
$$\begin{array}{r} 32 \\ \times\ 30 \\ \hline \end{array}$$

a. 90
b. 960
c. 150
d. 92
e. NG

34.
$$\begin{array}{r} 32 \\ \times\ 52 \\ \hline \end{array}$$

a. 1664
b. 224
c. 1564
d. 804
e. NG

35. Jim kept a record of his math scores on tests. His scores were 23, 27, 21, 29. What was his average score?

a. 100
b. 80
c. 27
d. 25
e. NG

36. $5\overline{)305}$

a. 65
b. 59
c. 61
d. 601
e. NG

37. $3\overline{)651}$

a. 210 R 1
b. 210 R 7
c. 217
d. 207
e. NG

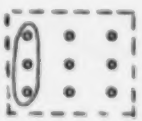
38. $60\overline{)305}$

a. 5 R 5
b. 50 R 5
c. 52
d. 5 R 3
e. NG

39. $12\overline{)264}$

a. 21 R 2
b. 21
c. 22 R 2
d. 22
e. NG

40. $\frac{3}{5}$ of 15 =



$\frac{1}{5}$ of 15 is 3

so $\frac{3}{5}$ of 15 is 3 x 3 or 9.

Now find $\frac{5}{6}$ of 18

a. 12
b. 15
c. 3
d. 6
e. NG

**End of Test**

**Check Your Work**

# Item Analysis

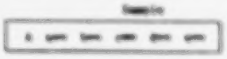
Fall, 1972

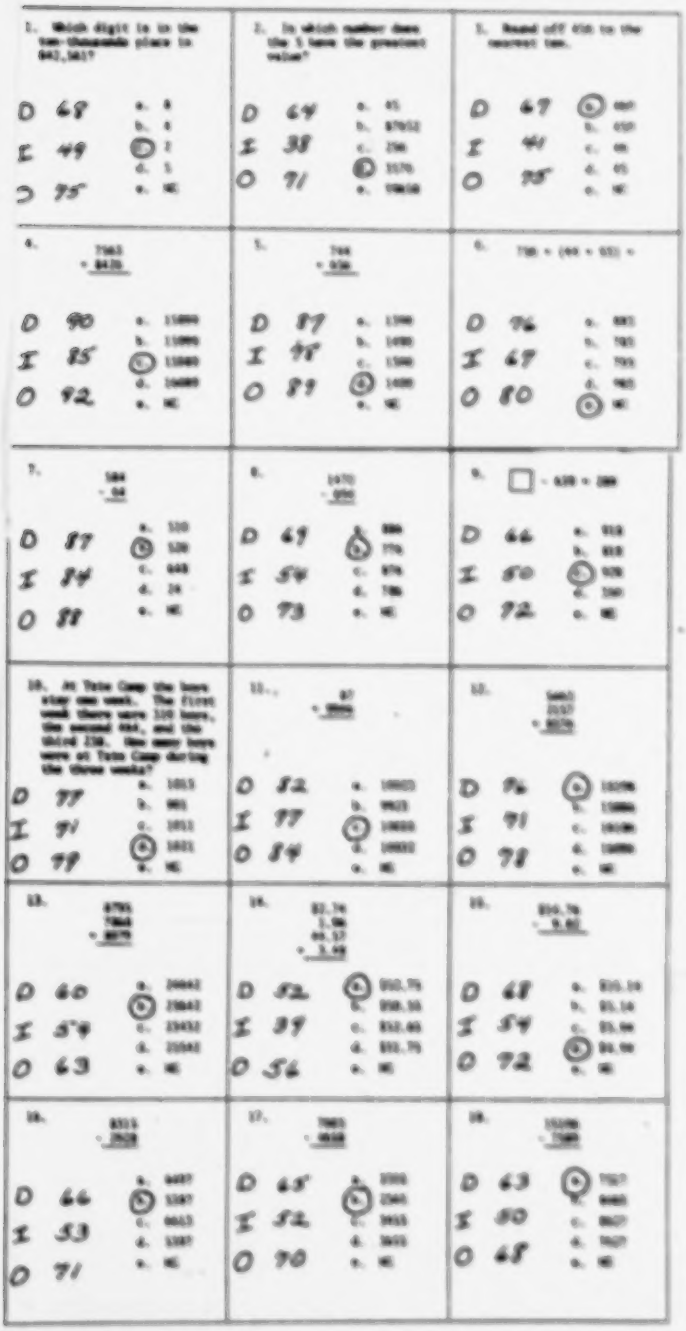
Unified School District No. 1
Racine, Wisconsin

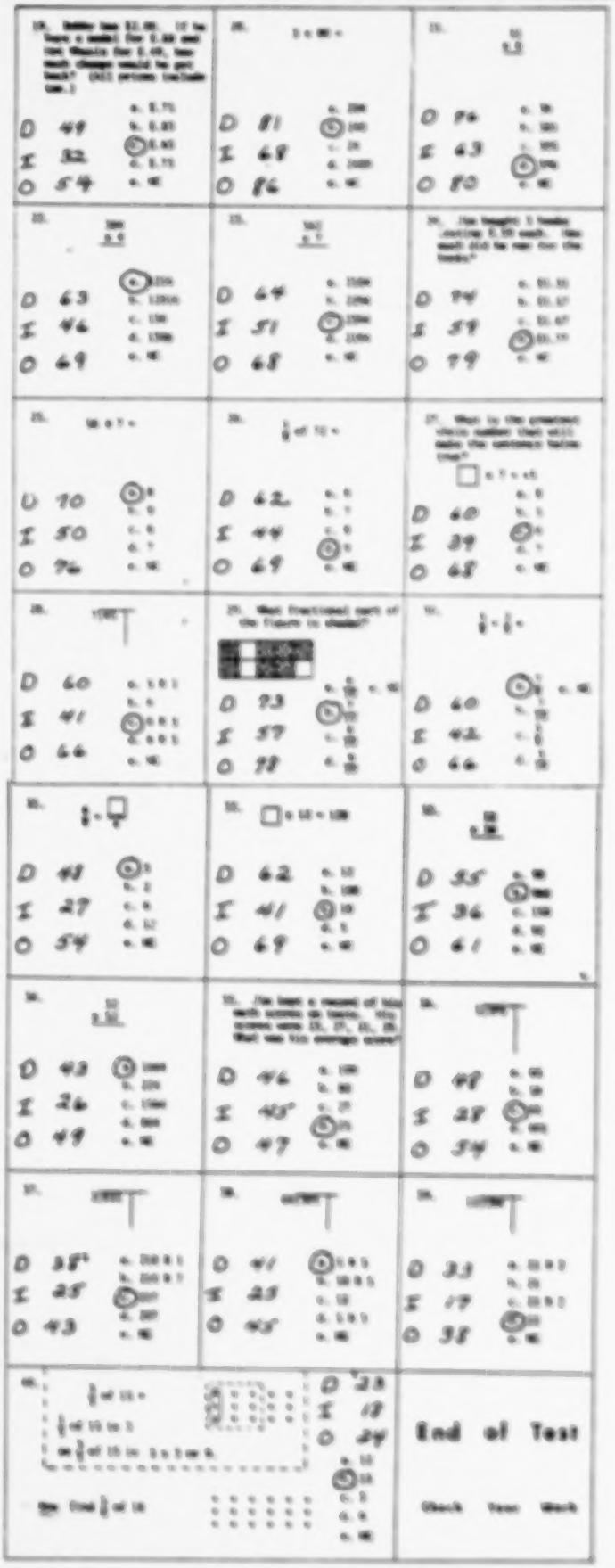
Level V - Diagnostic Test

Directions: Mark the example to each box. Then look at the possible answers to that box and see if your answer is given. If it is, fill in the square on your answer sheet which has the same letter as the answer you have chosen. If your answer is not given, fill in the space for the letter beside NG (Not Given). Use a separate sheet of paper for finding your answers.

D - District
I - Inner
O - Outer







Item Set 1

Grade 5

# ADDITION

4. 7563 + 8426

a. 15899
b. 15999
c. 15989
d. 16089
e. NG

4d + 4d

No renaming

p. 21
p. 308

D I O
90 85 92

5. 744 + 656

a. 1390
b. 1490
c. 1300
d. 1400
e. NG

3d + 3d

Repeated renaming

p. 21
p. 308

D I O
87 78 89

6. 756 + (44 + 93) =

a. 883
b. 783
c. 793
d. 983
e. NG

To 3d column

Horizontal format

unequal lengths

p. 21
p. 308

D I O
76 67 80

9. □ - 639 = 289

a. 918
b. 818
c. 928
d. 350
e. NG

Number equation

Relating addition and subtraction

p. 27
p. 309

D I O
66 50 72

10. At Tate Camp the boys stay one week. The first week there were 319 boys, the second 464, and the third 238. How many boys were at Tate Camp during the three weeks?

a. 1013
b. 901
c. 1011
d. 1021
e. NG

Word problem requiring addition

p. 22

D I O
77 71 79

11. 87 + 9946

a. 10023
b. 9923
c. 10033
d. 10032
e. NG

2d + 4d

Rename into 99

p. 21
p. 308

D I O
82 77 84

12. 5463 + 2157 + 8578

a. 16196
b. 15086
c. 16186
d. 16096
e. NG

4d column to 3 addends;

"carry" 1 in each column

p. 21
p. 308

D I O
76 71 78

13. 8795 + 7868 + 8979

a. 24642
b. 25642
c. 25432
d. 25542
e. NG

4d column to 3 addends;

"carry" 2 in each column

p. 21
p. 308

D I O
60 54 63

Item Set 2

Grade 5

# ADDITION

14.
$2.74
1.96
44.57
+ 3.48

(a) $52.75
b. $50.55
c. $52.65
d. $51.75
e. NG

To 4d column;
Repeated renaming;
Money

p. 21
p. 308

D' I O
52 39 56

19. Bobby has $2.00. If he buys a model for $.88 and Hot Wheels for $.49, how much change would he get back? (All prices include tax.)

a. $.75
b. $.83
(c) $.63
d. $.73
e. NG

Word problem requiring addition and subtraction

p. 33

D I O
49 32 54

35. Jim kept a record of his math scores on tests. His scores were 23, 27, 21, 29. What was his average score?

a. 100
b. 80
c. 27
(d) 25
e. NG

Word problem asking for average;
requires division

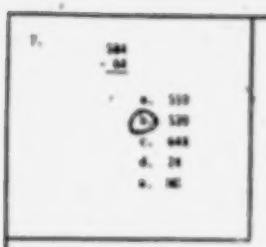
p. 102

D I O
46 45 47

Item Set 3

Grade 5

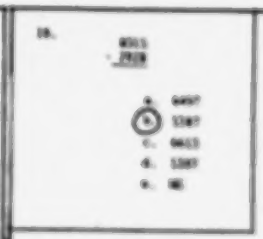
# SUBTRACTION



3d - 2d;
No renaming

p. 28, 30-31
p. 309

D I O
87 84 88



4d - 4d
Repeated renaming across one zero

p. 31
p. 309

D I O
66 53 71

4d - 3d
Repeated renaming

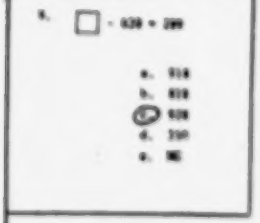
p. 31
p. 309

D I O
69 54 73

4d - 4d
Repeated renaming; across two zeros

p. 32
p. 309

D I O
65 52 70



Number equation
Relating addition and subtraction

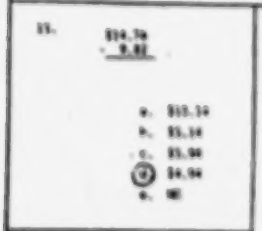
p. 27
p. 309

D I O
66 50 72

5d - 4d
Repeated renaming across one zero with subsequent renaming across one zero

p. 32
p. 309

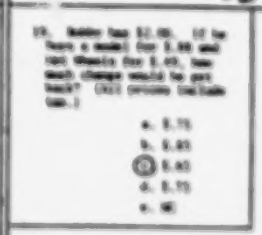
D I O
63 50 68



4d - 3d
Repeated renaming; Money

p. 32
p. 309

D I O
68 54 72



Word problem requiring addition and subtraction

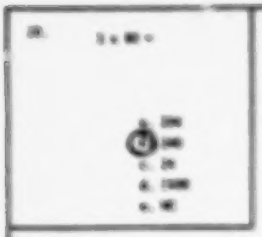
p. 33

D I O
49 32 54

Item Set 4

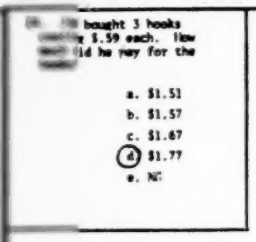
# MULTIPLICATION

Grade 5



2d x 1d
No renaming

p. 44-45 D I O
p. 311 81 68 86

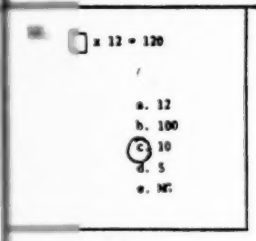


Word problem requiring multiplication

p. 46 D I O
74 59 79

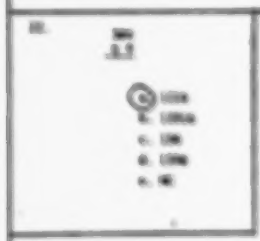
2d x 1d
No renaming

p. 44-45 D I O
p. 311 76 63 80



Number equation;
involving multiplication;
requires division

p. 141 D I O
62 41 69

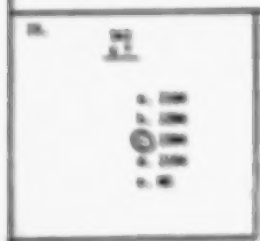


3d x 1d
Rename into zero

D I O
63 96 69

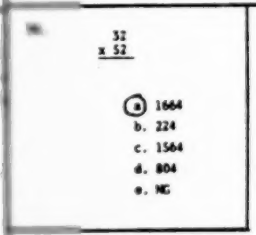
2d x 2d
Multiple of ten

D I O
55 36 61



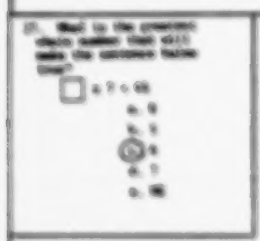
3d x 1d
Easy renaming

p. 44-45 D I O
p. 311 64 51 68



2d x 2d
Easy renaming

pp. 49-50 D I O
p. 312 43 26 49



Number inequality
involving multiplication

p. 103 D I O
p. 315 60 39 68

Item Set 5

Grade 5

# DIVISION

25. 56 ÷ 7 =

a. 8
b. 9
c. 6
d. 7
e. NG

2d ÷ 1d
No remainder;
No subtraction

p. 55
p. 314

D I O
70 50 76

36. 57305

a. 85
b. 50
c. 61
d. 601
e. NG

3d ÷ 1d
No remainder
No subtraction

p. 63-65
p. 314

D I O
48 28 54

28. 7)45

a. 5 R 1
b. 6
c. 6 R 3
d. 6 R 5
e. NG

2d ÷ 1d
Remainder
w/subtraction

p. 58-60
p. 314

D I O
60 41 66

37. 35851

a. 210 R 1
b. 210 R 7
c. 217
d. 207
e. NG

3d ÷ 1d
No remainder
w/subtraction

p. 63-65
p. 314

D I O
38 25 43

32. □ x 12 = 120

a. 12
b. 100
c. 10
d. 5
e. NG

Number equation;
involving multiplication;
requires division

p. 141

D I O
62 41 69

38. 607305

a. 5 R 5
b. 50 R 5
c. 52
d. 5 R 3
e. NG

3d ÷ 2d
Divisor is multiple of ten
Remainder

p. 81
p. 315

D I O
41 25 45

35. Jim kept a record of his math scores on tests. His scores were 25, 27, 21, 29. What was his average score?

a. 100
b. 80
c. 27
d. 25
e. NG

Word problem asking for average;
requires division

p. 102

D I O
46 45 47

39. 127264

a. 21 R 2
b. 21
c. 22 R 2
d. 22
e. NG

3d ÷ 2d
No remainder
w/subtraction

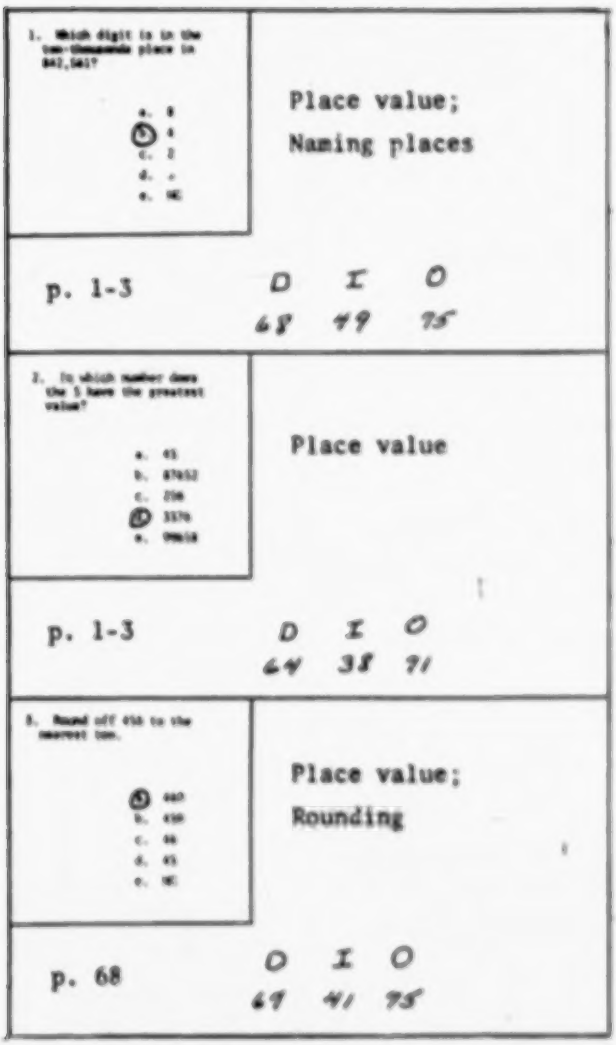
p. 83
p. 316

D I O
33 17 38

Item Set 6

Grade 5

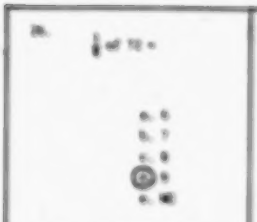
# PLACE VALUE



Item Set 7

Grade 3

# FRACTIONS

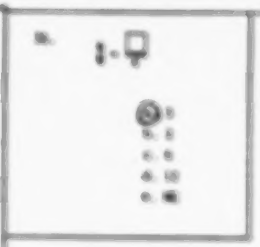


Fraction;

Multiplication of whole number by unit fraction; really a division problem

p. 177-178
p. 325

D 42 I 44 O 69

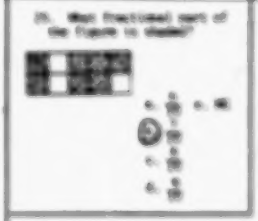


Fraction;

Reducing fraction to lowest terms

p. 107-109
p. 319

D 72 I 27 O 39

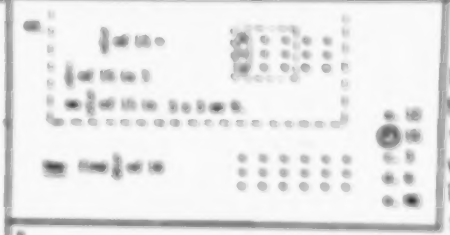


Fraction;

Representing a part of the whole as a fraction

p. 175

D 73 I 37 O 78

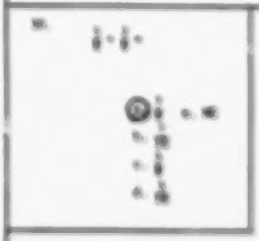


Fraction;

Multiplication of whole number by fraction

p. 177-178
p. 325

D 23 I 18 O 24



Fraction;

Add fractions with same denominator; no reducing

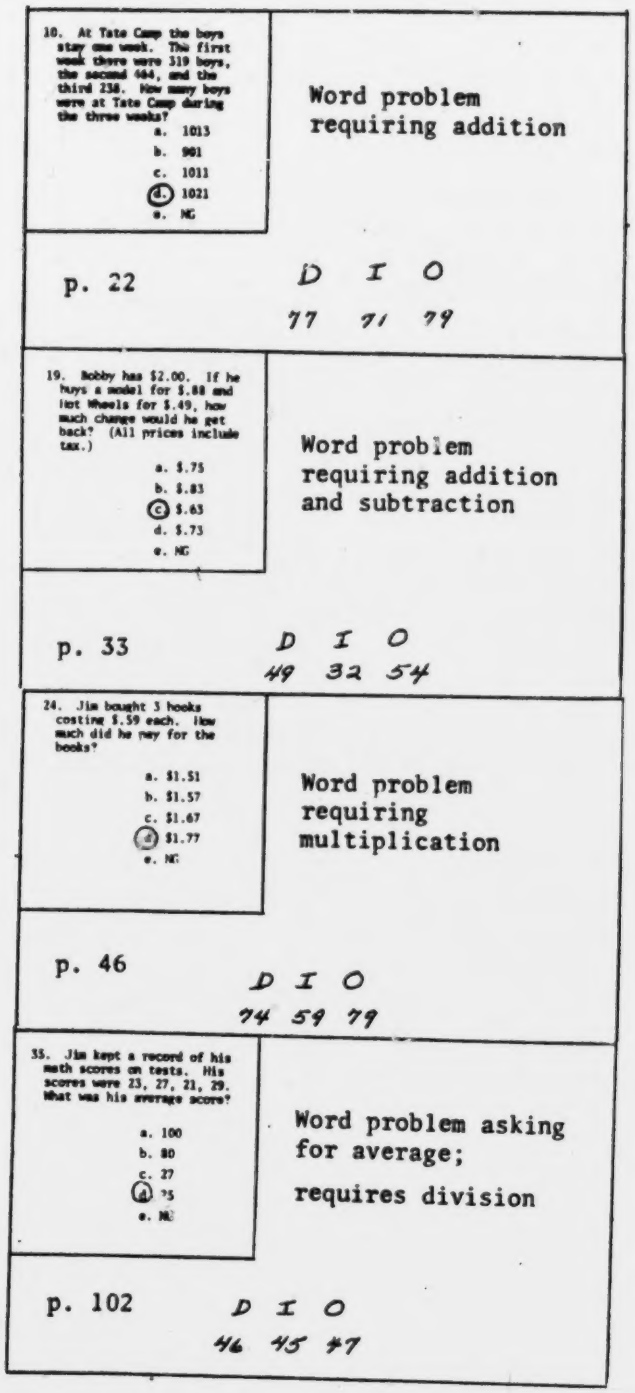
p. 114-115
p. 320

D 40 I 42 O 44

Item Set 8

Grade 5

# PROBLEM SOLVING


10. At Tate Camp the boys stay one week. The first week there were 319 boys, the second 444, and the third 258. How many boys were at Tate Camp during the three weeks?
a. 1013
b. 901
c. 1011
d. 1021
e. NG
Word problem requiring addition
p. 22
D I O
77 71 79
19. Bobby has $2.00. If he buys a model for $.88 and Hot Wheels for $.49, how much change would he get back? (All prices include tax.)
a. $.75
b. $.83
c. $.63
d. $.73
e. NG
Word problem requiring addition and subtraction
p. 33
D I O
49 32 54
24. Jim bought 3 books costing $.59 each. How much did he pay for the books?
a. $1.51
b. $1.57
c. $1.67
d. $1.77
e. NG
Word problem requiring multiplication
p. 46
D I O
74 59 79
35. Jim kept a record of his math scores on tests. His scores were 23, 27, 21, 29. What was his average score?
a. 100
b. 80
c. 27
d. 25
e. NG
Word problem asking for average;
requires division
p. 102
D I O
46 45 47

# Unified School District No. 1 of Racine County
## DIVISION OF INSTRUCTIONAL SERVICES

NAME _____

SCHOOL _____

TEACHER _____ GRADE _____

_____ _____

_____ _____

_____ _____

_____ _____

**DECIMALS**

| | | |
|---|---|---|
| SKILLS | D1 | Change decimal to fraction |
| | D2 | Change fraction to decimal |
| | D3 | Change decimal to mixed number |
| | D4 | Change mixed number to decimal |
| | D5 | |
| ADD. | D6 | Add; equal dec. lengths; H & V |
| | D7 | Add; unequal dec. lengths; H & V |
| | D8 | Add; integers plus decimals; H & V |
| | D9 | |
| SUBT. | D10 | Subtract; equal dec. lengths; H & V |
| | D11 | Subtract shorter decimal from longer; H&V |
| | D12 | Subtract longer decimal from shorter; H&V |
| | D13 | Subtract integer from dec.; dec. from int. |
| | D14 | |
| MULT. | D15 | Multiply; one factor has dec. point |
| | D16 | Multiply; both factors have dec. points |
| | D17 | Multiply; requires zeros in products |
| | D18 | |
| DIVISION | D19 | Divide; decimal point in D. |
| | D20 | Divide; dec.pt.in D; 0 after dec.pt.in Q. |
| | D21 | Divide; dec. point in D and d |
| | D22 | Divide; dec. pt. in D & d; 0 at end in D&d |
| | D23 | Divide; dec. point in d. |
| | D24 | Divide; dec. pt.in d; 0 in D; no 0 in Q |
| | D25 | |
| ROUNDING | D26 | Round decimal to one less place |
| | D27 | Round decimal more than one place |
| | D28 | Round to 0 in last decimal place |
| | D29 | Divide; dec. quotient, round quotient |
| | D30 | |
| | D31 | Progress Test 1; Add & Sub. |
| | D32 | Progress Test 2; Multiply |
| | D33 | Progress Test 3; Add, Sub., Mult. |
| | D34 | Progress Test 4; Divide |
| | D35 | Progress Test 5; Add, Sub., Mult., Divide |

**PERCENT**

| | |
|---|---|
| P1 | 2 digit percent to decimal |
| P2 | 1 digit percent to decimal |
| P3 | 3 digit percent to decimal |
| P4 | Percent with decimal to decimal |
| P5 | Fractional or mixed percent to decimal |
| P6 | Decimal to percent |
| P7 | Fraction to percent |
| P8 | Percent to fraction; reduce |
| P9 | Mixed percent to fraction; reduce |
| P10 | |
| P11 | Finding a percent of a number, whole % |
| P12 | Finding a percent of a number, mixed % |
| P13 | Finding a percent of a number, fract % |
| P14 | Finding number when percent is known |
| P15 | Finding what the percent is |
| P16 | Find percent; round off |
| P17 | |
| P18 | Progress Test 1; Percent - Decimal |
| P19 | Progress Test 2; Percent - Fraction |
| P20 | Progress Test 3; Using percent |
| P21 | Progress Test 4; Using percent |

Specification of the Computational Component of the Mathematics Program.
GRADES 3-8

RACINE, WISCONSIN

## WHOLE NUMBERS

| | | |
|---|---|---|
| ADDITION | 1 | |
| | 2 | Basic Facts - Addition |
| | 3 | Fact equations |
| | 4 | to 4d + 4d, no R V & H |
| | 5 | to 3d + 3d W/R to rR V & H |
| | 6 | to 3d col. carry 1 V & H |
| | 7 | to 3d col. carry 2 V & H |
| | 8 | to 5d col. carry 1, 2 |
| | 9 | Special case add. (ie to 99) |
| | 10 | |
| SUBTRACTION | 11 | Basic Facts - Subtraction |
| | 12 | to 4d - 4d no R |
| | 13 | to 4d - 4d w/r R |
| | 14 | to 5d - 5d w/seq. R |
| | 15 | to 5d - 5d w/rR across Os |
| | 16 | Sub. eq. Horiz. easy |
| | 17 | Sub. eq. Horiz. hard |
| | 18 | Subtraction check - special cases |
| | 19 | |
| MULTIPLICATION | 20 | Basic Facts - Multiplication |
| | 21 | 2d x 1d, no R |
| | 22 | to 3d x 1d, w/easy R, R to O, H&V |
| | 23 | to 3d x 1d, w/hard R, H&V |
| | 24 | mults. of 10, 100 |
| | 25 | 2d x 2d, to hard R, H&V |
| | 26 | to 4d x 2d, to hard R, R to O, H&V |
| | 27 | to 4d x 3d, to hard R |
| | 28 | to 4d x 3d, w/os in factors |
| | 29 | Facts equations, Special Cases |
| | 30 | Checking Multiplication, /9 |
| | 31 | |
| DIVISION | 32 | Basic Facts - Division |
| | 33 | to 4d ÷ 1d no rem. easy |
| | 34 | to 4d ÷ 1d no rem. hard, O in Q |
| | 35 | to 4d ÷ 1d w/rem. easy |
| | 36 | to 4d ÷ 1d w/rem. hard, O in Q |
| | 37 | to 4d ÷ 2d, easy |
| | 38 | to 4d ÷ 2d, hard, to O in Q |
| | 39 | to 4d ÷ 2d, rem. as fraction |
| | 40 | Division equation, Special Cases |
| | 41 | Checking division |
| | 42 | |
| | 43 | Progress test 1 A&S |
| | 44 | Progress test 2 A&S |
| | 45 | Progress test 3 M&D |
| | 46 | Progress test 4 M&D |
| | 47 | Progress test 5 ASMD |
| | 48 | Progress test 6 ASMD |

## FRACTIONS

| | | |
|---|---|---|
| SKILLS | P1 | |
| | P2 | Reduce to lowest terms; easy |
| | P3 | Improper fr. to mixed no.; no red. |
| | P4 | Improper fr. to mixed no.; w/red. |
| | P5 | Reduce to lowest terms; hard |
| | P6 | Renaming fractions; higher terms |
| | P7 | Mixed no. to improper fraction |
| | P8 | LCD equals larger denom. |
| | P9 | LCD; relatively prime |
| | P10 | LCD: common factor |
| | P11 | LCD of 3 fractions |
| | P12 | Ordering fractions |
| | P13 | |
| ADDITION | P14 | Add; same denom.; no red. |
| | P15 | Add; same denom.; w/red. |
| | P16 | Add; same denom.; sum> 1 |
| | P17 | Add mixed nos.; same denom. |
| | P18 | Add; one denom. mult. of other |
| | P19 | Add; relatively prime denoms. |
| | P20 | Add; denom. w/common factor |
| | P21 | Add; three fractions; diff. denoms. |
| | P22 | |
| SUBTRACTION | P23 | Subtract; same denom.; simple |
| | P24 | Subtract mixed; same denom; no borr |
| | P25 | Subtract; same denom; w/borrowing |
| | P26 | Subtract, diff. denom.; simple |
| | P27 | Subtract mixed; diff. denom; borrow |
| | P28 | |
| MULT. | P29 | Multiply; no reducing |
| | P30 | Multiply w/reducing |
| | P31 | Integer x frac.; "of"; inverses |
| | P32 | Multiply mixed numbers |
| | P33 | Multiply large numbers; three frac. |
| | P34 | |
| DIV. | P35 | Divide by fraction |
| | P36 | Divide by mixed number or integer |
| | P37 | |
| | P38 | Progress Test 1; Fraction Skills |
| | P39 | Progress Test 2; Fraction Skills |
| | P40 | Progress Test 3; Add |
| | P41 | Progress Test 4; Sub. |
| | P42 | Progress Test 5; Add. & Sub. |
| | P43 | Progress Test 6; Multiply |
| | P44 | Progress Test 7; Add., Sub., Mult. |
| | P45 | Progress Test 8; Divide |
| | P46 | Progress Test 9; Mult. & Divide |
| | P47 | Progress Test 10; Add., Sub., Mult., Div |
| | P48 | |

RTSS19-10 R A C I N E D I A G N O S T I C F E E D B A C K S Y

*** GRADE 7 MATHEMATICS DIAGNOSTIC TEST ***
PERCENTILES-RAW SCORES-PRIMARY PUPIL SETS

PRIMARY PUPIL SET- SAWASKY 03 81
RESULTS FOR TEST -

HIGH- 37 LOW- 12 MEAN- 26.0
NUMBER OF PUPILS- 28

| SCORE | FREQ | PC-ILE | STA9 | SCORE | FREQ | PC-IL |
|---|---|---|---|---|---|---|
| 12 | 1 | 0.0 | 1 | | | |
| 16 | 1 | 3.6 | 2 | | | |
| 17 | 1 | 7.1 | 2 | | | |
| 18 | 1 | 10.7 | 3 | | | |
| 20 | 1 | 14.3 | 3 | | | |
| 21 | 1 | 17.9 | 3 | | | |
| 22 | 1 | 21.4 | 3 | | | |
| 23 | 2 | 25.0 | 4 | | | |
| 24 | 3 | 32.1 | 4 | | | |
| 25 | 1 | 42.9 | 5 | | | |
| 26 | 1 | 46.4 | 5 | | | |
| 27 | 1 | 50.0 | 5 | | | |
| 28 | 2 | 53.6 | 5 | | | |
| 29 | 1 | 60.7 | 6 | | | |
| 30 | 3 | 64.3 | 6 | | | |
| 31 | 1 | 75.0 | 6 | | | |
| 32 | 1 | 78.6 | 7 | | | |
| 33 | 1 | 82.1 | 7 | | | |
| 34 | 2 | 85.7 | 7 | | | |
| 35 | 1 | 92.9 | 8 | | | |
| 37 | 1 | 96.4 | 9 | | | |

T- SAWASKY 03 81
-

MEAN- 26.0
- 28

| -ILE | STA9 | SCORE | FREQ | PC-ILE | STA9 |
|---|---|---|---|---|---|
| 0.0 | 1 | | | | |
| 3.6 | 2 | | | | |
| 7.1 | 2 | | | | |
| 10.7 | 3 | | | | |
| 14.3 | 3 | | | | |
| 17.9 | 3 | | | | |
| 21.4 | 3 | | | | |
| 25.0 | 4 | | | | |
| 32.1 | 4 | | | | |
| 42.9 | 5 | | | | |
| 46.4 | 5 | | | | |
| 50.0 | 5 | | | | |
| 53.6 | 5 | | | | |
| 60.7 | 6 | | | | |
| 64.3 | 6 | | | | |
| 75.0 | 6 | | | | |
| 78.6 | 7 | | | | |
| 82.1 | 7 | | | | |
| 85.7 | 7 | | | | |
| 92.9 | 8 | | | | |
| 96.4 | 9 | | | | |

RTSS14-08 RACINE DIAGNOSTIC FEEDBACK S

*** GRADE 7 MATHEMATICS DIAGNOSTIC TEST ***
RESPONSES FOR SCORING SETS BY PRIMARY PUPIL SET

PRIMARY PUPIL SET .. HOSS 01 84

TEST PART .LEVEL VII DIAG. TEST
PUPILS ANSWERING ... 29

| ITEM | PERCENT A | PERCENT B | SELECT C |
|---|---|---|---|
| 1 | 0 | 93* | 0 |
| 2 | 0 | 17 | 7 |
| 3 | 62* | 10 | 14 |
| 4 | 3 | 0 | 90* |
| 5 | 0 | 0 | 24 |
| 6 | 0 | 10 | 0 |
| 7 | 3 | 83* | 3 |
| 8 | 7 | 72* | 3 |
| 9 | 7 | 0 | 76* |
| 10 | 21 | 3 | 7 |
| 11 | 0 | 0 | 48* |
| 12 | 83* | 3 | 3 |
| 13 | 17 | 34* | 14 |
| 14 | 83* | 7 | 3 |
| 15 | 0 | 3 | 0 |
| 16 | 0 | 90* | 0 |
| 17 | 0 | 66* | 14 |
| 18 | 83* | 3 | 0 |
| 19 | 0 | 0 | 79* |
| 20 | 3 | 76* | 0 |
| 21 | 3 | 7 | 41 |
| 22 | 66* | 7 | 7 |
| 23 | 41 | 7 | 45* |
| 24 | 3 | 28 | 31 |
| 25 | 69* | 7 | 0 |
| 26 | 0 | 0 | 7 |
| 27 | 17 | 0 | 55* |
| 28 | 0 | 14 | 45* |
| 29 | 7 | 48* | 7 |
| 30 | 59* | 7 | 3 |
| 31 | 28* | 21 | 3 |
| 32 | 7 | 7 | 31* |
| 33 | 7 | 55* | 7 |
| 34 | 14* | 21 | 21 |
| 35 | 3 | 3 | 7 |
| 36 | 3 | 14 | 28* |
| 37 | 0 | 17 | 41* |
| 38 | 48* | 0 | 14 |
| 39 | 10 | 0 | 7 |
| 40 | 17 | 31* | 7 |

ONSES FOR SCORING SETS BY PRIMARY PUPIL SET

1  84

TEST

| | PERCENT SELECTING RESPONSE | | | | |
|---|---|---|---|---|---|
| A | B | C | D | E | OMIT |
| 0 | 93* | 0 | 7 | 0 | 0 |
| 0 | 17 | 7 | 62* | 14 | 0 |
| 62* | 10 | 14 | 3 | 10 | 0 |
| 3 | 0 | 90* | 0 | 7 | 0 |
| 0 | 0 | 24 | 72* | 3 | 0 |
| 0 | 10 | 0 | 0 | 90* | 0 |
| 3 | 83* | 3 | 0 | 10 | 0 |
| 7 | 72* | 3 | 0 | 17 | 0 |
| 7 | 0 | 76* | 7 | 10 | 0 |
| 21 | 3 | 7 | 41* | 28 | 0 |
| 0 | 0 | 48* | 0 | 52 | 0 |
| 83* | 3 | 3 | 0 | 10 | 0 |
| 17 | 34* | 14 | 3 | 31 | 0 |
| 83* | 7 | 3 | 3 | 3 | 0 |
| 0 | 3 | 0 | 76* | 21 | 0 |
| 0 | 90* | 0 | 3 | 7 | 0 |
| 0 | 66* | 14 | 10 | 7 | 3 |
| 83* | 3 | 0 | 0 | 10 | 3 |
| 0 | 0 | 79* | 0 | 17 | 3 |
| 3 | 76* | 0 | 0 | 14 | 7 |
| 3 | 7 | 41 | 24* | 21 | 3 |
| 66* | 7 | 7 | 7 | 7 | 7 |
| 41 | 7 | 45* | 0 | 0 | 7 |
| 3 | 28 | 31 | 31* | 0 | 7 |
| 69* | 7 | 0 | 10 | 7 | 7 |
| 0 | 0 | 7 | 83* | 3 | 7 |
| 17 | 0 | 55* | 7 | 7 | 14 |
| 0 | 14 | 45* | 7 | 21 | 14 |
| 7 | 48* | 7 | 3 | 21 | 14 |
| 59* | 7 | 3 | 7 | 10 | 14 |
| 28* | 21 | 3 | 0 | 28 | 21 |
| 7 | 7 | 31* | 14 | 21 | 21 |
| 7 | 55* | 7 | 3 | 3 | 24 |
| 14* | 21 | 21 | 7 | 10 | 28 |
| 3 | 3 | 7 | 52* | 7 | 28 |
| 3 | 14 | 28* | 3 | 24 | 28 |
| 0 | 17 | 41* | 10 | 3 | 28 |
| 48* | 0 | 14 | 0 | 10 | 28 |
| 10 | 0 | 7 | 21* | 31 | 31 |
| 17 | 31* | 7 | 10 | 3 | 31 |

RTSS17-07 R A C I N E D I A G N O S T I C F E E D B A C K S

*** GRADE 7 MATHEMATICS DIAGNOSTIC TEST ***
FAIL/MARGINAL REPORT

NO FAIL PRESCRIPTION

| ITEM SET 7-PERCENT-PLACE VALUE | FAIL LIMIT | C PC. MARGIN |
|---|---|---|
| TEETER LARRY | MARGINAL | 33 |
| BEDNAR KEITH | MARGINAL | 16 |
| BRISH CHERYL | MARGINAL | 50 |
| SIEVERT DOUGLAS | MARGINAL | 50 |
| DENNARD REBECCA | MARGINAL | 33 |
| MARTINEZ MARIO | MARGINAL | 50 |
| MCGEE SAMUEL | FAIL | 0 |
| RUGG DEBRA | MARGINAL | 33 |
| KLACAN SUSAN RAE | MARGINAL | 50 |
| GALLION TERRI JO | MARGINAL | 50 |
| OSZUSCIK EDWARD T | MARGINAL | 50 |
| ALBRITTON EDDIE J | MARGINAL | 33 |
| LAFEVER DEBRA | MARGINAL | 33 |
| THOMPSON RANDALL | MARGINAL | 50 |
| ETLICHER SANDRA | MARGINAL | 50 |
| SHAFF MARTIN | MARGINAL | 50 |

MARGINAL PRESCRIPTION
1-PLACE VALUE ROUNDING LTC P 71 2-EXPANDED NO
3-PLACE VALUE LTC P 66 38-WORD PROBLEM PERC
39-EXPRESS FRACTIONAL PART OF WHOLE AS PERCENT
40-CHANGE 2 DIGIT PERCENT TO DECIMAL LTC P 11

NO FAIL PRESCRIPTION

| ITEM SET 8-APPLICATION PROBLEMS | FAIL LIMIT | C PC. MARGIN |
|---|---|---|
| TEETER LARRY | FAIL | 0 |
| BEDNAR KEITH | FAIL | 0 |
| BRISH CHERYL | MARGINAL | 50 |
| SIEVERT DOUGLAS | MARGINAL | 50 |
| MCGEE SAMUEL | FAIL | 0 |
| HANSEN LORRAINE K | MARGINAL | 25 |
| KLACAN SUSAN RAE | MARGINAL | 25 |
| GALLION TERRI JO | MARGINAL | 25 |
| PETERSEN MARK T | MARGINAL | 25 |
| OSZUSCIK EDWARD T | MARGINAL | 25 |
| RABUCK JOHN P | MARGINAL | 50 |
| ALBRITTON EDDIE J | MARGINAL | 25 |

FAIL PRESCRIPTION

ENT-PLACE VALUE  FAIL LIMIT  0 PC. MARGINAL LIMIT 50 PC.

| | | |
|---|---|---|
| | MARGINAL | 33 |
| | MARGINAL | 16 |
| | MARGINAL | 50 |
| AS | MARGINAL | 50 |
| CA | MARGINAL | 33 |
| O | MARGINAL | 50 |
| | FAIL | 0 |
| | MARGINAL | 33 |
| RAE | MARGINAL | 50 |
| JO | MARGINAL | 50 |
| RD T | MARGINAL | 50 |
| IE J | MARGINAL | 33 |
| | MARGINAL | 33 |
| ALL | MARGINAL | 50 |
| RA | MARGINAL | 50 |
| | MARGINAL | 50 |

RGINAL PRESCRIPTION
PLACE VALUE ROUNDING LTC P 71  2-EXPANDED NOTATION  LTC P 69
PLACE VALUE LTC P 66  38-WORD PROBLEM PERCENT MSM P 468
-EXPRESS FRACTIONAL PART OF WHOLE AS PERCENT  MSM P 468
-CHANGE 2 DIGIT PERCENT TO DECIMAL  LTC P 112, MSM P 468.

FAIL PRESCRIPTION

ICATION PROBLEMS  FAIL LIMIT  0 PC. MARGINAL LIMIT 50 PC.

| | | |
|---|---|---|
| | FAIL | 0 |
| | FAIL | 0 |
| | MARGINAL | 50 |
| AS | MARGINAL | 50 |
| | FAIL | 0 |
| NE K | MARGINAL | 25 |
| RAE | MARGINAL | 25 |
| JO | MARGINAL | 25 |
| T | MARGINAL | 25 |
| RD T | MARGINAL | 25 |
| | MARGINAL | 50 |
| IE J | MARGINAL | 25 |

RTSS26-04 R A C I N E D I A G N O S T I C F E E D B A C K S

*** GRADE 7 MATHEMATICS DIAGNOSTIC TEST ***

STUDENT SCORES

PUPIL SET - YORE 01 82 DISTRICT P

| NUMBER | NAME | TEST | RAW | PCILE | STA9 | MEAN |
|---|---|---|---|---|---|---|
| 03694 | SEAGER BARBARA | GRADE 7 MATHDF 10-72 | 17 | 14 | 3 | 30 |
| 03914 | HOLSTEIN DONALD | GRADE 7 MATHDF 10-72 | 38 | 94 | 8 | 30 |
| 03982 | TARWID GERALD | GRADE 7 MATHDF 10-72 | 33 | 74 | 6 | 30 |
| 04571 | AKGULIAN KARI | GRADE 7 MATHDF 10-72 | 35 | 84 | 7 | 30 |
| 04677 | WAGNER CHARLES | GRADE 7 MATHDF 10-72 | 37 | 91 | 8 | 30 |
| 04813 | FINLEY PAUL | GRADE 7 MATHDF 10-72 | 22 | 30 | 4 | 30 |
| 04825 | LEFFLER CATHY | GRADE 7 MATHDF 10-72 | 37 | 91 | 8 | 30 |
| 04835 | SNEED CONNIE | GRADE 7 MATHDF 10-72 | 29 | 55 | 5 | 30 |
| 04862 | PETERSEN MICHELE | GRADE 7 MATHDF 10-72 | 33 | 74 | 6 | 30 |
| 04875 | TSUCHIYA PAMELA | GRADE 7 MATHDF 10-72 | 28 | 51 | 5 | 30 |
| 04876 | WHITSTON REGINA | GRADE 7 MATHDF 10-72 | 35 | 84 | 7 | 30 |
| 04887 | KINDER SUSAN | GRADE 7 MATHDF 10-72 | 40 | 99 | 9 | 30 |
| 04900 | POLZIN KATHY | GRADE 7 MATHDF 10-72 | 35 | 84 | 7 | 30 |
| 04918 | SHOEMAKER LAURA | GRADE 7 MATHDF 10-72 | 34 | 78 | 7 | 30 |
| 04924 | TARVER LISA | GRADE 7 MATHDF 10-72 | 35 | 84 | 7 | 30 |
| 04928 | WISHAU BRENDA | GRADE 7 MATHDF 10-72 | 40 | 99 | 9 | 30 |
| 08068 | HARTLEIN SANDRA | GRADE 7 MATHDF 10-72 | 34 | 78 | 7 | 30 |
| 08086 | THOMPSON BRENDA | GRADE 7 MATHDF 10-72 | 21 | 25 | 4 | 30 |
| 08102 | HENDERSON JODI | GRADE 7 MATHDF 10-72 | 13 | 6 | 2 | 30 |

GRADE 7 MATHEMATICS DIAGNOSTIC TEST *** DATE 10/16/72
STUDENT SCORES

| | | DISTRICT | | PUPIL SET | | | | STANDARD | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ST | RAW | PCILE | STA9 | MEAN | HIGH | LOW | PUPIL/MEAN | GRADE | PCILE | STA9 |
| ADE 7 MATHDF 10-72 | 17 | 14 | 3 | 30 | 40 | 9 | 56.6 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 38 | 94 | 8 | 30 | 40 | 9 | 126.6 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 33 | 74 | 6 | 30 | 40 | 9 | 110.0 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 35 | 84 | 7 | 30 | 40 | 9 | 116.6 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 37 | 91 | 8 | 30 | 40 | 9 | 123.3 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 22 | 30 | 4 | 30 | 40 | 9 | 73.3 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 37 | 91 | 8 | 30 | 40 | 9 | 123.3 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 29 | 55 | 5 | 30 | 40 | 9 | 96.6 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 33 | 74 | 6 | 30 | 40 | 9 | 110.0 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 28 | 51 | 5 | 30 | 40 | 9 | 93.3 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 35 | 84 | 7 | 30 | 40 | 9 | 116.6 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 40 | 99 | 9 | 30 | 40 | 9 | 133.3 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 35 | 84 | 7 | 30 | 40 | 9 | 116.6 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 34 | 78 | 7 | 30 | 40 | 9 | 113.3 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 35 | 84 | 7 | 30 | 40 | 9 | 116.6 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 40 | 99 | 9 | 30 | 40 | 9 | 133.3 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 34 | 78 | 7 | 30 | 40 | 9 | 113.3 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 21 | 25 | 4 | 30 | 40 | 9 | 70.0 | RAW SCORES ONLY | | |
| ADE 7 MATHDF 10-72 | 13 | 6 | 2 | 30 | 40 | 9 | 43.3 | RAW SCORES ONLY | | |

RTSS24-06 R A C I N E D I A G N O S T I C F E E D B A C K S

*** GRADE 7 MATHEMATICS DIAGNOSTIC TEST ***
ITEM SET RESPONSE ANALYSIS

HUBERTY 03 81

PORTIONS OF THE TEST REFERENCED IN FOLLOWING REPORTS ARE --

| | ITEM SETS | TEST PART |
|---|---|---|
| 1 | ADD AND SUBTRACT | LEVEL VII DIAG. TEST |
| 2 | MULT WHOLE NUMBERS | |
| 3 | DIVISION WHOLE NOS | |
| 4 | DECIMALS ADD, SUBT | |
| 5 | DECIMALS MULT, DIV | |
| 6 | FRACTIONS | |
| 7 | PERCENT-PLACE VALUE | |
| 8 | APPLICATION PROBLEMS | |

CED IN FOLLOWING REPORTS ARE --

| TEST PART |
| --- |
| LEVEL VII DIAG. TEST |

RTSS24-06 RACINE DIAGNOSTIC FEEDBACK S

*** GRADE 7 MATHEMATICS DIAGNOSTIC TEST ***

ITEM SET RESPONSE ANALYSIS

HUBERTY 03 01

| | | SET 1 | SET 2 | SET 3 | SET 4 | SET 5 | SET 6 |
|---|---|---|---|---|---|---|---|
| | TEST PART..... | 1111111111 | 1111 | 1111 | 1111 | 111111 | 111111 |
| | ITEM NUMBER..... | 0000011111 | 1123 | 2333 | 0111 | 122222 | 222331 |
| | ..... | 4567902456 | 8990 | 4234 | 8013 | 901238 | 567567 |
| 3667 | BEDNAR KEITH | ....AA.C.. | ... | BEDB | EAEE | ..E.AE | D...EE |
| 3722 | BRISH CHERYL | ..B.A.C.E. | CDAD | E..D | E.EC | DCCE.B | ....EE |
| 3767 | SIEVERT DOUGLAS | ....AAE... | ED.E | B..C | .AEC | DECBDA | ..A...A |
| 4101 | DENNARD REBECCA | .....B.... | ... | ..DB | ABEA | .D..A. | ...CBD |
| 8182 | MARTINEZ MARIO | ....BA.BAC | B... | C..E | DA.D | ..ACD. | ..DAE |
| 8206 | MCGEE SAMUEL | BE.EDEE.E. | E... | BE.. | AEEE | ..E..E | C.E.EE |
| 8248 | GREEN TOMMY | B......... | .E.. | .... | ..EE | E.C.AE | ....E. |
| 8272 | HANSEN LORRAINE K | .......... | .... | .E.. | ...A | ....AE | .CE.E. |
| 8291 | RUGG DEBRA | .......... | ...D | ...D | ...A | ..ABB. | C...ED |
| 8321 | KLACAN SUSAN RAE | ....A.E... | E... | ...E | .... | ..... | ..... |
| 8351 | GALLION TERRI JO | .......... | .... | CE.. | ..EE | .EC.AE | .CE.E. |
| 8369 | PETERSEN MARK T | E.CD AD.A. | .E.. | EBED | .A.D | EDACA. | .....E |
| 8405 | OSZUSCIK EDWARD T | .E...E.... | .... | EEA | .EEE | ..ECA. | .C...E |
| 8436 | RABUCK JOHN P | AC...AE... | CBCC | E..C | .A.. | BAACDB | ...CD. |
| 8447 | CHASE SCOTT C | ..C...AC... | .... | EB.. | .A.A | .E.DAD | ..... |
| 8551 | ALBRITTON EDDIE J | .....BBE.E | .E.. | C.EB | .BEE | E.E.A. | D.E.E. |
| 9617 | HODGSON GARY | .....E. | .... | B... | .... | ..... | .C..E. |
| 9675 | LAFEVER DEBRA | .C...AE... | .E.. | B.AC | .A.E | E.C.D. | ....E. |
| 9694 | THOMPSON RANDALL | BE..EB.... | ...E | B... | .BEE | ..E..E | ....E. |
| 9709 | BELLOVARY PATRICK | ..DEECE... | .E.. | E.DB | .C.. | ECED. | .EE.E. |
| 9740 | ETLICHER SANDRA | ...EEE...E | ..A. | ...C | .E.E | ..E.AE | ....EC |
| 9819 | SHAFF MARTIN | ...EB.D.E. | .DEE | CAAC | C..C | DEECAB | ....D. |
| 14143 | PANIZZA STEVEN J | E.....E... | ...E | BEA. | .... | ..E.AE | ..E..E |
| 14240 | WATSON PAMELA | .......... | .... | B... | .... | ....A. | ..D... |
| 30313 | JOHNSON TAMRA | .....E.... | .... | C.A. | .EE. | ..E.E. | ..... |
| 30435 | TEETER LARRY | ....A..... | .BEE | EDDC | ...E | BEEDAE | .CAB.A |

ITEM SET RESPONSE ANALYSIS

| T 1 | SET 2 | SET 3 | SET 4 | SET 5 | SET 6 | SET 7 | SET 8 |
|---|---|---|---|---|---|---|---|
| 11111111 | 1111 | 1111 | 1111 | 111111 | 111111 | 111111 | 1111 |
| 00011111 | 1123 | 2333 | 0111 | 122222 | 222333 | 000334 | 1133 |
| 67902456 | 8990 | 4234 | 8013 | 901238 | 567567 | 123890 | 0718 |
| .AA.C.. | ... | BEDB | EAEE | ..E.AE | D...EE | AB.BEC | AEEB |
| .A.C.E. | CDAD | E..D | E.ED | DCCE.B | ....EB | .C..AC | .CE. |
| ..AAE... | ED.E | B..C | .AED | DECBDA | ..A..A | .BB.A. | A.E. |
| ...B.... | ... | ..DB | ABEA | .D..A. | ...CBD | AAC.C. | B... |
| ..BA.BAD | B... | C..E | DA.D | ..ACD. | ..DAEB | .C..AD | A... |
| .EDEE.E. | E... | BE.. | AEEE | ..E..E | C.E.EB | DABEEC | ECCE |
| ........ | .E.. | .... | ..EE | E.C.AE | ....E. | .E.... | ..B. |
| ..... .. | .... | .E.. | ...A | ....AE | .CE.E. | ..BE.. | .AEE |
| ..... .. | ...D | ...D | ...A | ..ABB. | D...ED | DE.B.C | ...B |
| ..A.E... | E... | ...E | .... | ...... | ...... | ...DEC | .CBD |
| ........ | .... | CE.. | ..EE | .EC.AE | .CE.E. | .ACE.. | .CEE |
| CD AD.A. | .E.. | EBED | .A.D | EDACA. | .....B | ..E.A. | AEE. |
| ...E.... | .... | EEA | .EEE | ..ECA. | .C...E | .AB.E. | ECC. |
| ...AE... | CBCC | E..C | .A.. | BAACDB | ...CD. | .E.... | A. . |
| ...AC... | .... | EB.. | .A.A | .E.DAD | ...... | .....D | A... |
| ...BBE.E | .E.. | C.EB | .BEE | E.E.A. | D.E.E. | .BC.CA | BCB. |
| ......E. | .... | B... | .... | ...... | .C..E. | ...... | ..B. |
| ...AE... | .E.. | B.AC | .A.E | E.C.D. | ....E. | .A.BAA | ACBB |
| .EB.... | ...E | B... | .BEE | ..E..E | ....E. | .CC..A | B.E. |
| DEECE... | .E.. | E.DB | .C.. | ECBD. | .EE.E. | .E..A. | C.E. |
| .EEE...E | ..A. | ...C | .E.E | ..E.AE | ....ED | A.BB.. | ECEB |
| .EB.D.E. | .DEE | CAAC | C..C | DEECAB | ....D. | .A..AA | ..E. |
| ....E... | ...E | BEA. | .... | ..E.AE | ..E..B | .C.... | ..E. |
| ........ | .... | B... | .... | ....A. | ..D... | ...... | ..B. |
| ...E.... | .... | C.A. | .EE. | ..E.E. | ...... | .E.... | E.E. |
| .A...... | .BEE | EDDC | ...E | BEEDAE | .CAB.A | AEBCBD | .CBC |